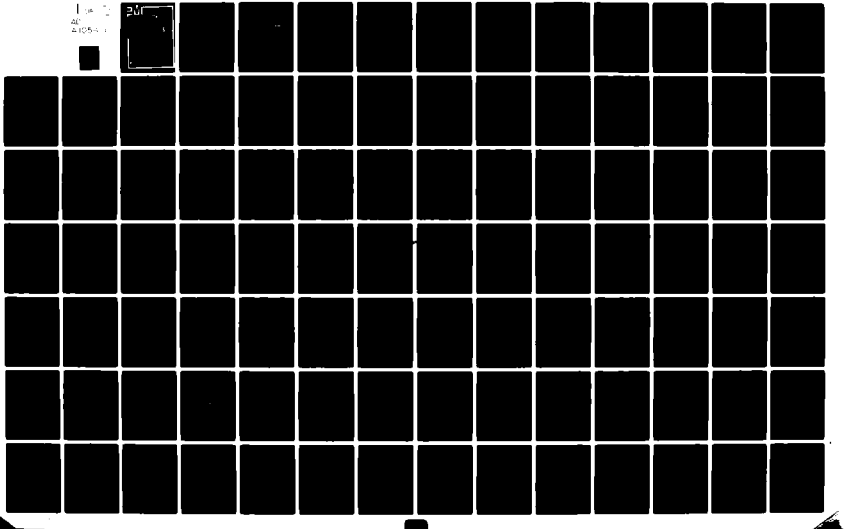
AD-A105 600 FAR WEST LAB FOR EDUCATIONAL RESEARCH AND DEVELOPMENT--ETC F/G 5/1
KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING--ETC(U)
SEP 81 J W THOMAS, J C HECHT, D P STUDEBAKER EMW-C-0295

UNCLASSIFIED NL



FINAL REPORT, SEPTEMBER 30, 1981
EMERGENCY MANAGEMENT
COMPONENT

LEVEL II

12

AD A105600

DTIC
ELECTE
S OCT 0 6 1981
E

KNOWLEDGE SYNTHESIS and APPLICATION of CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

EMW-C-0295 new
WORK UNIT 4422E

DTIC FILE COPY

Approved for public release; distribution unlimited

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1855 FOLSOM STREET · SAN FRANCISCO, CALIFORNIA 94103 · (415) 565-3000

81 10 5 067

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

by

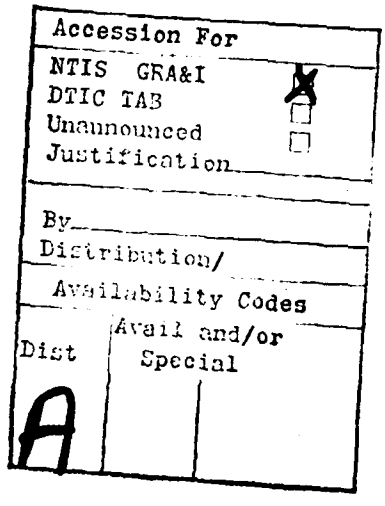
John W. Thomas, Project Coordinator
Joyce C. Hecht
Diana P. Studebaker
Bela H. Banathy, Principal Investigator

for

Federal Emergency Management Agency
Washington, D.C. 20472

Final Report
September 30, 1981

EMW-C-0295
Work Unit 4422E



FEMA Review Notice

This report has been reviewed in the Federal Emergency Management Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Federal Emergency Management Agency or the Far West Laboratory for Educational Research and Development, nor does mention of trade names, commercial products, or organizations imply endorsement by the Federal Emergency Management Agency or the Far West Laboratory for Educational Research and Development.

This project has been funded with Federal funds from the Federal Emergency Management Agency under the contract number EMW-C-0295.

Approved for Public Release; Distribution Unlimited

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1855 Folsom Street • San Francisco, California 94103

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: N/A
2. GOVT ACCESSION NO.: AD-A105600
3. RECIPIENT'S CATALOG NUMBER:

4. TITLE (and Subtitle): Knowledge Synthesis and Application of Crisis-Expectant Lodging/Shelter Guidance
5. TYPE OF REPORT & PERIOD COVERED: Final Report 7-1-80 through 9-30-81
6. PERFORMING ORG. REPORT NUMBER:

7. AUTHOR(s): John W. Thomas, Joyce C. Hecht, Diana P. Studebaker, Bela H. Banathy
8. CONTRACT OR GRANT NUMBER(s): EMW-C-0295

9. PERFORMING ORGANIZATION NAME AND ADDRESS: Far West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, California 94103
10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: Work Unit 4422E

11. CONTROLLING OFFICE NAME AND ADDRESS: Federal Emergency Management Agency, Washington, D.C. 20472
12. REPORT DATE: Sept[illegible]81
13. NUMBER OF PAGES: 102

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): Federal Emergency Management Agency, Washington, D.C. 20472
15. SECURITY CLASS. (of this report):
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE:

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

Final rpt. 7-1-80 - 9-30-81

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Lodging/Shelter Managers
Training
Expansion
Motivation
Shelter Organization
Shelter Leadership
Radiological Monitoring
Radiological Defense

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

(OVER)

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

29918

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

by

John W. Thomas, Project Coordinator
Joyce C. Hecht
Diana P. Studebaker
Bela H. Banathy, Principal Investigator

for

Federal Emergency Management Agency
Washington, D.C. 20472

Final Report
September 30, 1981

EMW-C-0295
Work Unit 4422E

FEMA Review Notice

This report has been reviewed in the Federal Emergency Management Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Federal Emergency Management Agency or the Far West Laboratory for Educational Research and Development, nor does mention of trade names, commercial products, or organizations imply endorsement by the Federal Emergency Management Agency or the Far West Laboratory for Educational Research and Development.

This project has been funded with Federal funds from the Federal Emergency Management Agency under the contract number EMW-C-0295.

Approved for Public Release; Distribution Unlimited

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1855 Folsom Street • San Francisco, California 94103

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

Unclassified

Far West Laboratory for Educational Research and Development
September 30, 1981, 102 pages, EMW-C-0295, Work Unit 4422E

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.

TABLE OF CONTENTS

PREFACE

Five task areas were defined for the project: Knowledge Synthesis and Application of Crisis-Expectant Lodging/Shelter Guidance. The central purpose of the project was to address two interrelated task areas; namely:

- The general bounding of critical content areas in terms of survival potential with the view of suggesting preferred strategies of knowledge synthesis and application development (Task Area Three in the contract).

- The development of at least two knowledge areas described in the document "How to Manage Emergency Lodging and Fallout Shelters" into much more detailed guidance for the specialist performing the identified function (Task Area Four in the contract).

Two additional task areas explored implementation strategies relevant to training and motivation for training during a crisis period; namely:

- The identification of preferred means of undertaking shelter/lodging systems training on a large scale basis during a crisis period, and

- The definition of preferred means of maintaining volunteer interest in lodging/shelter management during non-crisis periods at the same time providing the means for large scale knowledge input in a crisis-expectant period.

A fifth task area called for providing limited effort in conceptualizing application strategies, state of knowledge papers, and other inputs relating to knowledge synthesis and application opportunities.

In this report, literature reviews, conclusions, and recommendations are presented for each of the five task areas listed above. Task Area Four is the exception: Outlines for instructional modules are provided; the detailed guidance called for in the contract will be provided under separate cover in the form of two prototype orientation modules.

PRECEDING PAGE BLANK-NOT FILMED

THE STRUCTURE OF THE REPORT

Following an introductory part, the report is presented in five chapters, corresponding in sequence with the five task areas as delineated in the contract.

1. Introduction

Current U.S. policy calls for the development of the capability for relocation in a crisis situation. This crisis relocation entails the organized movement of the 140 million people who live in risk areas--areas which are of sufficient military or economic importance to be likely targets--to safer locations called host areas. It is expected that crisis relocation could increase the survival rate of the U.S. population in a nuclear exchange from 40% to 80% and reduce the survival asymmetry between the U.S. and the Soviet civil defense systems (FEMA, 1980). Moreover, as described in Presidential Directive 41 (September, 1978) the achievement of a crisis reloction capability is expected "to enhance deterrance and stability, reduce the possibility of Soviet crisis coercion, and be adaptable to help deal with peacetime emergencies and disasters" (FEMA, 1980b, p. 1).

It is important to remember that the movement of people away from risk areas alone is not sufficient to insure maximum survivability. FEMA estimates (FEMA, 1980b) attribute increased survivability over that provided by crisis relocation alone to at least the following civil defense elements: the shelter program including nuclear civil protection planning and shelter survey, crisis shelter-production, shelter marking and stocking, in-shelter ventilation kits, and effective shelter management; direction and

2. Problems

A preliminary step in developing a training, education, and delivery system for shelter management personnel involves the consideration of five problem areas. These problem areas are the source of the present project's task areas discussed in the five chapters that follow in this report.

Problem #1: How can shelter/lodging training and education be accomplished on a large scale during a crisis-expectant period?

It is estimated that if crisis relocation took place, approximately 1,000,000 facilities would be required to shelter 238,000,000 people. To manage these facilities, up to 2,000,000 trained shelter managers would be required (FEMA 1980a). A small number of shelter manager officer/instructors can be trained in peacetime, but the mass of shelter personnel would have to be trained in a very short time. The shelter managment training system must be capabable of rapid expansion during an emerging crisis; therefore, strategies and resources for accomplishing this expansion must be identified in advance.

Problem #2: How can the interest, commitment, and expertise of shelter management personnel trained in peacetime be maintained?

A prerequisite for the rapid expansion of the shelter system in a crisis is the existance of a shelter cadre of people trained in peacetime (FEMA, 1981). However, the unpleasantness of the subject matter makes recruiting difficult, and its unusual nature makes realistic training difficult. Furthermore, it is difficult to maintain trainee interest in preparing for an emergency which may never occur. The shelter management training system must be able to motivate and sustain the interest of its trainees.

Chenault and Davis present seven steps in developing a host area reception and care plan:

1. The description and listing of individual host area buildings which can be used as congregate loding facilities by evacuees --including the congregate loding capacity of each structure.

2. The designation of fallout shelter and feeding facilities which can be used by evacuees lodged in each building in 1 above.

3. The distribution of the expected (maximum) number of evacuees across the above designated lodging, shelter, and feeding facilities.

4. The designation of special care facilities which will be used by special groups of evacuees posing special needs or problems.

5. The division of the host jurisdiction into R/C Districts and component Lodging Sections, whose headquarters will supervise a manageable number of evacuees and the provision of essential services within each area.

6. The development of a staffing plan and management structure for the R/C Service and its component units.

7. Before and during an emerging crisis, recruitment, orientation, and training for any unfilled staff positions in the host area's R/C organization.

Step #7 refers to the design of a training and education system for reception and care in a crisis-expectant period and the design of a delivery system capable of insuring that recruitment, expansion, and mobilization as well as orientation and training are provided in some efficient (rapid, flexible, foolproof) and timely (preparation in peacetime, deployment in a crisis-expectant period) fashion.

The present project is concerned with the functions of lodging and sheltering in general and guidance for the accomplishment of Step #7 above in particular. The following sections present guidance from the literature oriented to a selection of subproblems involved in the design of a training and education system for managers of congregate lodging facilities and fallout shelters and their staff in a crisis-expectant period.

2. Problem Areas

A preliminary step in developing a training, education, and delivery system for shelter management personnel involves the consideration of five problem areas. These problem areas are the source of the present project's task areas discussed in the five chapters that follow in this report.

Problem #1: How can shelter/lodging training and education be accomplished on a large scale during a crisis-expectant period?

It is estimated that if crisis relocation took place, approximately 1,000,000 facilities would be required to shelter 238,000,000 people. To manage these facilities, up to 2,000,000 trained shelter managers would be required (FEMA Requirements Statement, 1981). A small number of shelter manager officer/instructors can be trained in peacetime, but the mass of shelter personnel would have to be trained in a very short time. The shelter managment training system must be capabable of rapid expansion during an emerging crisis; therefore, strategies and resources for accomplishing this expansion must be identified in advance.

Problem #2: How can the interest, commitment, and expertise of shelter management personnel trained in peacetime be maintained?

A prerequisite for the rapid expansion of the shelter system in a crisis is the existance of a shelter cadre of people trained in peacetime (FEMA, 1981). However, the unpleasantness of the subject matter makes recruiting difficult, and its unusual nature makes realistic training difficult. Furthermore, it is difficult to maintain trainee interest in preparing for an emergency which may never occur. The shelter management training system must be able to motivate and sustain the interest of its trainees.

Problem #3: How can the large number of potential content areas and technical topics be organized for instructional purposes?

Whether they are trained in peacetime or in a crisis-expectant period, shelter managers must learn how to supervise operations and tasks across a wide variety of administrative and technical areas. In order for the training system to be manageable, organizational principles must be identifield that will allow this content to be synthesized and matched to appropriate instructional strategies.

Problem #4: What is the best way to present training in specific content areas?

Once content areas have been identified, it is necessary to present the content in an understandable, easily mastered, and efficient form. A modular approach to instruction must be used such that content units can be compatible with a variety of audiences and implementation conditions.

Problem #5: There are ongoing knowledge consolidation needs relative to planned conferences and other projects.

In addition to the information presented in the training modules, the project collected information useful to FEMA and other audiences. This information was presented in several papers (described in Chapter Five).

CHAPTER ONE:

EXPANSION AND TRAINING FOR A CRISIS-EXPECTANT PERIOD

Task Area One: The identification of preferred means of undertaking shelter lodging systems training on a large scale during a crisis period.

The Shelter Management Training System (SMTS) Model and Delivery System (SMTDS) Model (Thomas, Studebaker, Hecht & Banathy, 1980) were designed to fulfill a set of unique training requirements: (1) the system must provide for in-depth training in selected technical and managerial competency areas; (2) the system must be established and maintained largely by volunteers in peacetime--an environment where shelter management training is not a high priority; and (3) the system must be capable of rapid expansion with regard to people and training capability during an emerging international crisis.

The SMTS model consists of a set of training requirements, specifications, and strategies for providing the competencies needed to carry out shelter management functions. These functions cover a variety of complex managerial and technical areas of responsibilities. SMTDS is a model of the complementary set of arrangements that provide for the flexible use of SMTS in three likely training contexts (time periods) by a variety of potential agencies.

The problem addressed in this section is the problem alluded to in training requirement #3 above: How to design a system that is capable of rapid expansion during an emerging crisis. A discussion of this problem area must address at least the following questions:

- Staffing. Who should be selected or recruited to serve as the core shelter management staff to be trained in peacetime? Who should be selected or recruited to serve as the expansion staff for a crisis-expectant period?

PRECEDING PAGE BLANK-NOT FILMED

- Expansion Mechanism. What will be the method or methods for rapidly expanding and mobilizing the additional staff (including methods for recruitment if this is not done during peacetime)?

- Rapid Training Strategy. What will be the method or methods for providing orientation and technical training during a crisis-expectant period and how might these training methods be dependent upon available time?

- Responsibilities for Activation and Delivery. Who might be responsible for activating, coordinating, and monitoring outreach, mobilization, and training in a crisis-expectant period?

The problem of expansion during a crisis period does not seem to be one of motivation or finding volunteers. Dynes and Quarantelli (1972), in their analysis, indicate that availability of additional personnel for civil defense functions would not be a problem. Many institutions suspend operations during emergencies, making personnel available for volunteer service. Moreover, during an emerging crisis, the public would become increasingly aware of the need to perform civil defense functions and many who would not have volunteered during peacetime would do so quite willingly. Ellis and Noyes (1978) describe historical precedents when citizens responded to emergency training appeals from the government, or, in cases where the government failed to initiate civil defense training, organized and conducted it themselves.

The major challenge for the initial days of a crisis-expectant period would be how to acomplish the rapid training or large groups of people in a short period of time with minimal start-up time and minimal trained leadership. Sullivan and Heller (1978) speculate that during a crisis-expectant period or during a crisis surge period if little warning time occurs, 500,000-600,000 shelter managers would have to be trained in about a one-week period. FEMA estimated twice this amount (1980a).

A previous analysis, the Model for a Shelter Management Training

System (Thomas, et al., 1980), provides a list of criteria for determining requirements for expansion and rapid training strategies.

- It must provide additional personnel and facilities within a short time.
- It should be easily adaptable for use with trained and untrained facilitators, for trainees working in groups or alone.
- It must address the need for training the emergent shelter manager.
- It should allow for rapid assimilation of the most essential, highest priority information.
- It should include suggestions and guidelines concerning appropriate instructional techniques to meet different conditions.
- It should provide reference materials, suggestions for practice exercises, and discussion questions.
- Materials should include priority action checklists, directions and diagrams for operating complex equipment in a form that could be posted on the shelter wall.
- Materials should be in a compact, easily transportable form.
- Materials should be in a form that would allow for easy duplication of the large quantities that would be needed.
- Each area of responsibility should have its own checklist, necessary directions, and diagrams.
- It should use content and methods appropriate to accelerated training and crisis conditions.
- The training method should allow people in different locations to talk to each other and share information.
- It should provide for practice drills and simulation if there is time available.
- It should transmit information with high fidelity.
- It should prepare trainees for the realities of shelter living.
- It should integrate shelter managers into the civil defense system.

The following sections present strategies from the literature that might be modified for use in providing the rapid expansion of training in a crisis-expectant period.

1. The Multiplier Strategy

The multiplier strategy is a general strategy for knowledge dissemination or for the diffusion of a curriculum or program. In essence, the multiplier strategy is a means of transferring something (a program, a capability) without the necessity for central control and the resources that are associated with such a direct transfer strategy. In the present instance, a multiplier strategy would be a matter of FEMA conducting some training in peacetime which would be repeated somehow either during peacetime or in a crisis-expectant period, or both.

Banathy, et al. (1977) presents three alternative ways that the multiplier effect can occur.

- The top down method. National organizations would deliver the program through their channels to agencies or affiliates at the local level.
- The "ripple" effect. Once a program is established at the local level either through national or state initiation, other organizations would become interested and involved and spread the program to new audiences and/or new locations.
- The institutional ripple effect. Agencies (at either the organizational or the institutional level) might deliver the program to other agencies who would then be responsible for carrying out some or all of the required operations at the same or new locations.

An example of the top down method would be the use of the American National Red Cross for providing shelter management training. Responsibilities and procedures for recruitment, outreach, and mobilization would be assumed by the Red Cross as a matter of organizational policy. These responsibilities and procedures would filter down from the national to the local level through the Red Cross system.

An example of the ripple effect would be the use of community colleges for providing shelter management training. Because of the loose ties between community colleges and especially between state systems, the

vertical spread of responsibilities and procedures and the lateral spread of training sites and programs would have to be on the basis of local initiative rather than "top-down" control. Finally, combining the use of the Red Cross in a facilitator role with community colleges as training sites would be an example of the institutional ripple effect.

Additional types of agencies that might be enlisted for carrying out shelter management training include (Thomas, et al., 1980):

- National organizations with little federal affiliation but with systematically managed local structures: e.g., labor unions, public media corporations, social service fraternities.
- State government agencies: e.g., state community colleges, state emergency preparedness networks.
- Local agencies: e.g., governmental agencies such as the police, fire service and school districts; agencies that have national or state affiliation but are controlled locally such as religious organizations, labor union locals, and service and civic clubs.
- Private industry: shelter management training could be appended to already existing employee training program or organizational-planning (ORP) capability.
- Ad-hoc organizations: e.g., neighborhood youth groups, community centers.

The use of the multiplier strategy, i.e., the use of organizations and agencies other than those that are currently under FEMA's influence, presents problems or standardization and guidance. Attention must be paid to the development of guidelines, procedures, criterion-referenced examinations, and common orientation and technical materials that can be disseminated and form the core of shelter management training programs conducted by these multiplier agencies.

2. Strategies Identified in Civil Defense Training Literature

An early analysis of crisis period training was conducted by Brictson, Bustya and Streich (1967). The authors recommended the use of on-the-spot training packages to contain checklists and guidelines for shelter managers.

Trainers could circulate during an emergency situation, providing training as needed or the on-the-spot packages could be used by individual shelter managers or managers and deputies.

With regard to expansion of civil defense training in a crisis, Gordon, Bustya and Streich (1966) offer the following strategies:

- Enlist additional training personnel by utilizing the existing instructor cadre-high school science teachers, nurses, etc.
- Provide short-term training for large groups of learners in whatever classroom space that is available in the community or in the in-house training facilities such as the police academy or fire-fighting school.

Expansion strategies for a crisis-expectant period are specified in DCPA's Guide for Increasing Local Government Civil Defense Readiness During Periods of International Crisis (1979).

- Appoint a paid or volunteer training officer who, during peacetime will develop a plan for organizing and supervising accelerated training in time of crisis.
- Appoint deputies responsible for accelerated training in each functional area.
- Keep an up-to-date roster of instructors who are able and willing to carry out an accelerated training in crisis expectance periods.
- Provide adequate training by determining the shortage of essential personnel, and the number of classes required to meet the shortage, arranging for the assignment of the best qualified instructors to be available to teach the classes, and arranging for accelerated training to be conducted over an 8-12 hour day including evening sessions.
- Arrange for classroom space to be available during the training sessions by agreement with schools, colleges, police and fire departments, veterans organizations, etc.
- Arrange for adequate training materials and emergency forms to be available by procuring from the Region or State Civil Defense Agency enough for 150 percent of the estimated training load. Stockpile the materials at civil defense offices or at training facilities.
- Arrange for the Civil Defense Officer, the Emergency Public Information Office, and the Training Officer to prepare a public announcement concerning the time, location, and duration of training classes.

- Plan how trained managers would be assigned shelters and integrated into the civil defense structure.
- Test the accelerated training organization by conducting exercises.

Brictson, Bustya, and Streich (1967) recommend the following methods as appropriate for accelerated training during periods of increased readiness:

- Condensed academic curricula.
- Mass classroom instruction.
- Mass media instruction.
- Condensed refresher courses.
- Crosstraining for critical positions.
- Drills.
- Dissemination of handbooks, guides, and checklists.

The same writers suggest these techniques for in-shelter training:

- On-the-spot instruction.
- On-the-shelf handbooks, guides, and checklists.

With regard to peacetime training, i.e., what to do now in order to "get ready to get ready" in a crisis or crisis-expectant period, Harker and Coleman (1975) suggest the following strategies:

- Develop and refine planning and training materials and procedures suitable for rapid implementation during crisis buildup.
- Arrange for coordination of training with other civil defense activities by maintaining communication channels, conducting periodic workshops, and conducting prototype (experimental) planning and training development programs.
- Use computer-based applications to maintain and develop the capabilities for rapid dissemination during crisis buildup, including resource inventories and management, and training (Dial-A-Scenario) programs.
- Use computer-based applications to develop emergency resource data files for local areas.

- Use workshop exercises with scenarios and planning checklists for assigning emergency actions to appropriate personnel, reviewing and updating plans and resource data, and insuring the availability of special training materials and personnel for cadre personnel.
- Improve readiness of personnel by conducting accelerated refresher training in specialized courses.

Chenault and Davis (1976), in their analysis of training and education requirements for the total reception and care system, focus on the use of "already organized" groups to provide services and to facilitate recruitment, orientation, and training of reception and care organization staff. Chenault and Davis also recommend that training packages for reception and care be constructed as "discrete and separate parts of civil defense instructional programs because of the potential role of public welfare agencies in this effort..."

3. Recommendations

Preliminary recommendations for training managers of congregate lodging facilities and shelter managers during a crisis-expectant period are organized below according to the four issues listed in the beginning of this chapter: staffing, expansion mechanism, rapid training strategy, and activation and delivery. These recommendations come from various sources including presentations of the Interactive Research Symposium No. 2, the 1980 FEMA Training and Education "Requirements Statement," Chenault and Davis (1976), and Thomas, et al. (1980).

a. Staffing. Who should be selected or recruited to serve as the core shelter management staff to be trained in peacetime? Who should be selected or recruited to serve as the expansion staff for a crisis-expectant period?

- Core staff (Shelter Manager Instructor/Officers) should be trained during peacetime to develop the shelter system during this period, to coordinate operations among shelters during a crisis and to serve as an instructor and/or coordinator of instruction during a crisis-expectant or crisis surge period.

- Assuming one Shelter Instructor/Officer per 25 facilities, 40,000 Officers must be trained during peacetime.

- Instructor/Officers should be trained in a one-week course to be delivered under State cooperative agreements and by way of self-directed orientation and technical training modules completed through the Self-Directed Study Program. (See Table 1, Chapter Three).

- Core staff should also receive at least one day of instructor training as part of the one-week course and periodic refresher instruction concerning how to organize local training sessions.

- Core staff should be selected from the local emergency management system of the area, preferably from the host area and should be part of the county-level reception and care organization developed as part of crisis relocation planning.

- Approximately two million shelter managers will be required. This figure is based on the requirement to have one manager per 150 shelterees and two managers, or a manager and a deputy manager, per facility.

- Shelter managers should be recruited from the general population in most cases. Recruitment guidelines include:

    - Managers should be recruited in peacetime whenever local support for reception and care planning can be stimulated.

    - For each host area facility at least one manager should be selected from the host area population, preferably someone with knowledge of and managerial experience relative to that facility (e.g., hotel managers, school principals).

    - Additional managers should be recruited from among intact risk area organizations that plan to relocate as organizations.

    - When possible, managerial staff for larger facilities should be drawn from among colleagues at a formal or informal organization or institution.

b. Expansion Mechanism. What will be the method or methods for rapidly expanding and mobilizing additional staff (including methods for recruitment, if this is not done during peacetime)?

- Shelter Manager Instructor/Officers should, in cooperation with county level reception and care staff, complete dossiers on potential shelter managers in host areas and the region.

- A flexible strategy for contacting potential volunteers should be deployed: in those areas where reception and care planning is popular and for those individuals with both interest and capabilities, limited selection, planning, and training, should occur during peacetime.

- During the early days of an international crisis, shelter officers should contact all pre-selected candidate managers and ask for volunteers. Depending upon the density of the area and the status of the candidates, a constellation of the following methods could be used (all of these resources should be developed, distributed, and positioned in advance).

    - Radio and television recruitment spots.

    - Telegrams.

    - A letter signed by the state governor accompanied by a brief summary of crisis relocation, a rationale for CRP, a statement of duties and responsibilities of shelter managers and a rationale for his/her selection.

    - Guidelines for conducting telephone and personal interviews (to follow one or more of the above).

- A network approach to recruitment and to training should be planned in peacetime and/or activated in a crisis-expectant period. Top management candidates should be selected for the following attributes: familiarity with facilities, experience with the management of large groups of people and providing welfare services, contacts with other qualified individuals, status in the community, and interest in emergency preparedness. These top staff, once recruited, should be entreated to assist in the recruitment of qualified colleagues.

c. Rapid Training Strategy. What will be the method or methods for providing orientation and technical training during a crisis-expectant period and how might these training methods be dependant upon available time?

- Training materials will consist of an initial shelter management orientation package supplemented by multiple orientation modules covering various technical and administrative topics, e.g., radiological defense, and training modules matched to these orientation modules providing guidance and practice on technical operations, e.g., radiological monitoring. (See Table 1, Chapter Three.)

- Depending on the nature of the crisis (i.e., time constraints), the preferred strategy would be for Shelter Officers to conduct or arrange for one or two shelter management orientation workshops in the initial days of a crisis-expectant period. Then either participants would receive a series of orientation modules over the next several days or those modules would be administered in group sessions during the evening in that period. If a

worsening of the crisis should occur and relocation is expected, shelter managers would receive a series of technical modules for self-study (or group sessions would be administered, if possible). At that time, deputies would be selected from risk and host area populations and would be encouraged to use the training modules, and/or attend the sessions.

- On-the-job guidance sheets should be provided for shelter managers and deputies. These sheets should summarize all duties and responsibilities, priority operations, and technical guidance for all life-support operations.

d. Responsibilities for Activation and Training Delivery. Who might be responsibile for activating, coordinating, and monitoring outreach, mobilization, and training in a crisis-expectant period.

- Activation and training delivery strategies should be developed at the local level as part of crisis-relocation and reception and care planning with coordination assistance from regional FEMA training and education staff. Such plans should follow general guidelines distributed by the Office of Training and Education.

- Activation of crisis-expectant training should be vested in county reception and care coordinators on direct orders from the state governors. The order to begin recruitment and training should be passed to all Shelter Manager Officers within the county.

- Mobilization and training delivery plans should be drawn up in peacetime and readied for deployment in a crisis-expectant period.

- The recommended training delivery plan involves the use of Shelter Officers as coordinators and trained Red Cross Instructors to supplement Shelter Officers as instructors or, in the case of heavily populated areas, as the instructional cadre. Red Cross staff or volunteers would receive the shelter management orientation materials for review and study in the early days of a crisis-expectant period. Orientation workshops and orientation to technical operations would be set up by Shelter Manager Officers and Red Cross staff for all Shelter Managers in the county.

- Facilities and resources for training should be provided by area community colleges. Agreements should be arranged and formulated in advance.

CHAPTER TWO:

MAINTAINING VOLUNTEER INTEREST

Task Area Two: The definition of preferred means of maintaining volunteer interest in lodging/shelter management during non-crisis periods at the same time providing the means of large scale knowledge input in a crisis-expectant period.

1. Statement of the Problem

As has been stated, current civil preparedness policies call for the training, during peacetime, of only a skeleton cadre of the hundreds of thousands of trained operations personnel and volunteers that will be necessary to receive and care for relocated populations in a time of crisis. Problems associated with these policies include who to select for peacetime training, how to insure that this training is sufficient, how to reduce trainee attrition, and how to encourage the maintenance of a larger personnel and guidance system such that outreach training can occur quickly and efficiently during a crisis. With regard to congregate care facility/shelter managers (SMs, for short), these problems are complicated by the fact that, with the possible exception of radiological defense officers, SM training involves the most comprehensive and technical training of any position in the reception and care system.

Shelter management training involves not only a general introduction to shelter living, areas of responsibility, specific duties and roles of shelter staff, priorities, etc., as outlined in the existing shelter management training course, but also technical orientation and training in such areas as shelter organization, ventilation, radiological defense, and life support operations.

As is true for all technical training including management and administrative training, in order for that training to be effective, sufficient

PRECEDING PAGE BLANK-NOT FILMED

time and opportunities must be allocated for learning, practice, and applications under conditions that resemble the performance situation. But unlike training in areas such as communications and direction and control, shelter management skills are peculiar to the sheltering situation. There are few opportunities for managers to practice these learned skills relative to disasters other than nuclear attack. The result is not only a problem of readiness but a problem of motivation. It is difficult to keep trainees "in the system" when there is no opportunity for those trainees to use or practice their skills.

The specific situation regarding shelter management training is complicated by some general concerns related to civil defense and civil defense training in general. A number of investigators and analysts have pointed out that preparing for a war that very few people expect to occur in the near future is a situation that is poorly suited to attracting and sustaining the commitment of able volunteers (Brictson, 1963; Newitt & Singer, 1971). According to Beach (1967), the problem of maintaining volunteer participation in civil defense has two roots aside from factors such as conflicting duties and responsibilities that plague all volunteer systems. These roots are: (1) volunteers are reluctant to devote time and energy to learning skills that have a low probability of being used and (2) volunteers are sensitive to the possible negative reactions to their participation from family and friends.

Volunteers are also sensitive to the climate within a system and to the importance of the system in the society in which it exists (Ilsley, 1978; Niemi, 1978). During the past thirty years, the low priority assigned to civil defense in the United States has been reflected in its low level of funding and in the general discontinuity of concentrated efforts to achieve well-defined goals. As a result, a sense of strong

commitment has not been communicated to potential volunteers. Civil defense policies may even appear to conflict with other policies such as detente, the push for Strategic Arms Limitation Treaties, and the increased reliance on sophisticated weaponry to maintain the balance of power among nations.

The pages that follow present an analysis of strategies for dealing with the problems of shelter manager motivation and attrition. Literature on adult education, volunteer training, general training strategies and arrangements, and civil defense training served as the sources for the analysis. Selected strategies will be discussed as they relate to: a) motivating trained volunteer shelter managers to remain in the system and b) providing them with opportunities to maintain and improve their skills.

2. Considerations from the Literature

a. Principles of Adult Education. Knowles (1970) has developed principles of "andragogy" which have been confirmed by practice (Ingalls, 1973). These principles suggest not that adults learn differently than children, but that they are in a different position with regard to self-concept, experience, readiness to learn, and orientation to learning. As summarized by Knowles, these four classes of principles are:

Self-concept

- The physical and psychological climate should be one in which adults feel comfortable, respected, supported and generally treated as joint inquirers with the instructor.
- Adults will be more deeply motivated to learn those things they see the need to learn. Adults should be involved in self-diagnosis of their own learning needs.
- The learning-teaching transaction should be the mutual responsibility of learners and teacher. The teacher should be more of a catalyst than an instructor; he is a resource person and co-inquirer.
- Evaluation of learning should be a mutual process between teacher and students.

Experience

- Adults should be viewed as teaching resources. Their wealth of experience should be recognized and applied meaningfully to facilitate their own and other students' learning experiences.

Readiness to learn

- The curriculum should accommodate the changing social role and learning needs of the maturing adult.

Orientation to learning

- Adults engage in learning activities as a result of personal needs or pressures. They have a problem-centered orientation to their reasons for taking a course which should be considered when structuring the learning experience.

- The content of a learning experience should be persons-centered rather than discipline centered.

According to Main (1979) and Tough (1977), adults learn more effectively when they are active and independent and when they manage their own instruction. Tough (1968) stated that approximately 70 percent of adult learners surveyed gave as their primary reason for learning the desire to do something, produce something, or decide something. Randall (1978) also emphasized the practical approach for teaching adults. He cautioned that adults who learn in a passive way by reading and listening will forget 50 percent of what they learned in a year unless they have an opportunity to become actively involved. In two years, they will have forgotten 80%. He suggested that they should be encouraged to discuss problems, think out solutions, practice skills and be given opportunities to use what they have learned before they forget it or dismiss it from memory.

McClusky (1971) has developed a model of teaching and learning for adults. The model emphasizes "tailormade" instruction, small group instruction, highly specific instruction, and cooperative diagnostics based on the complex milieu of the adult learner.

> The strategies for learning (and for teaching) in the adult years require consideration for the individuality of adults, for their life commitments which may aid or obstruct learning, for their adult time perspective, for their transition through critical periods of life, for their acquisition of sets and roles which may aid or obstruct learning, and for the adult requirements that the learning be related to the problem (p. 514).

b. Motivating Volunteers. The volunteer organization that people are attracted to tend to reflect their motivations. It follows that volunteers would derive satisfaction from being involved with organizations and groups that help them to fulfill their goals. Ilsley (1978) identified the following broad categories of volunteer action grouped according to objectives.

- Citizens who come together spontaneously in support of a cause.
- Established service organizations and institutions that serve the good or general welfare.

Ilsley also cites the following as reasons why people volunteer:

- A desire to meet new people.
- A commitment to helping others.
- An interest in bettering or maintaining career status.
- A chance to gain new skills.
- A need to fill time.

Many writers have discussed the problem of maintaining volunteer interest. The strategies they suggest tend to cluster around the two broad dimensions set forth in Herzberg's Dual Factor Theory. Leidecker and Hall, (1974) summarizes these two dimensions as follows (p. 4):

1. Conditions surrounding or extrinsic to the task including administrative policies, shop cleanliness, interpersonal relations, fringe benefits, cost of living pay increases, and hygiene factors that remove obstacles in the work environment.

2. The task itself. Does it provide a sense of achievement and recognition for achievement? Is it interesting? Does it provide a challenge that can lead to a sense of growth?

The next pages present some of the strategies for maintaining volunteer interest that were brought to light by the literature review. These strategies are summarized and the sources are identified along with each strategy. The strategies are grouped according to the two factors identified above.

(1) Conditions surrounding or extrinsic to the task.

- Reimburse volunteers for out-of-pocket expenses (Leppert, 1978; Schindler-Rainman & Lippitt, 1977).
- Provide informal recognition on the job and formal recognition (special award ceremonies and dinners, pins, plaques, and certificates) (Niemi, 1978; Pell, 1977).
- Allow for personal levels of variation in time and interest without guilt or tension about divided loyalties and limited energy (Schindler-Rainman & Lippitt, 1977).

(2) The task itself.

- Give opportunities for volunteers to assume greater responsibility and make decisions, to advance to positions of greater influence (Haines, 1977; Leppert, 1978; Pell, 1977; Schindler-Rainman & Lippitt, 1977).
- Find out above the motives, abilities, and goals of the volunteer and communicate the goals and purposes of the organization (Ilsley, 1978; Schindler-Rainman & Lippitt, 1977).
- Inform the volunteer concerning what is expected, what are some of the broader policies, how the supervision works, the degree of responsibility or authority he or she would assume (Ilsley, 1978).
- Provide ongoing motivation by providing for individual conferences, volunteer involvement in planning, credit for suggestions used, assignment to a job that needs to be done (Little, 1978; Pell, 1977; Wilson, 1976).
- Present volunteer service as an opportunity for continuing educational opportunities, participation in conferences, etc. (Schindler-Rainman & Lippitt, 1977).
- Invite volunteers to participate in training sessions and other activities along with paid staff (Haines, 1977; Wilson, 1976).
- Provide opportunities for the volunteer to help in formulating goals and in the successive evaluation of the achievement of those goals (Schindler-Rainman and Lippitt, 1977).

- Provide mechanisms (conferences, written evaluations, etc.) which give feedback on performance (Haines, 1977; Schindler-Rainman & Lippitt, 1977).
- Provide for recognition from the agency and the community (Schindler-Rainman & Lippitt, 1977).
- Provide pre-service and in-service or refresher training (Pell, 1977).
- Help volunteers to feel that their contributions make a difference in the lives of others; give them a sense of being connected to or even influencing national policy or international events (Schindler-Rainman & Lippitt, 1977).
- Help volunteers to achieve self-actualization--a sense of doing one's own thing, feeling competent and adequate (Schindler-Raiman & Lippitt, 1977).
- Help volunteers obtain the support of groups that are important to them; whenever possible enable them to work with friends; have on-the-job sharing and discussion, find new friends; help them obtain support from family members (Schindler-Rainman & Lippitt, 1977).

c. Training Strategies and Arrangements. Training strategies that address the adult volunteer's needs and interests can include self-directed learning, experience-based learning, problem-centered learning, and small group learning. In practice, these strategies overlap to produce a teaching/learning model that is attuned to the adult learner's needs.

Self-directed learning as an instructional strategy can be defined as a learning arrangement whereby the responsibility for some or all of the processes or operations usually associated with a successful instructional event (e.g., guidance, pacing) are transferred from the instructor to the student (Knowles, 1975). This type of learning can be structured or unstructured; it can be initiated or planned either by the instructor or the learner; it can occur when students work as individuals with instructional materials or when a group of trainees interact with a packet of materials.

Some of the advantages of self-directed learning for adults are as follows. It takes into account the busy adult's schedule of work, family

and community responsibilities which often precludes a heavy investment of time and funds in formal schooling. Most important, it features an absence of supervision (McKeachie & Kulik, 1975; Thomas, 1980) which gives the learner a sense of efficacy or power over his or her learning that seems to lead to maximum retention and continued motivation to learn after the requirement to learn has been removed (Covington & Beery, 1976; Maehr, 1976). A survey conducted by Penland (1977) revealed that students choose self-directed learning courses because they allow students to set their own learning pace, to accomplish objectives in a way that matches their learning styles, and to maintain flexibility in both the style and the structure of learning.

Self-directed learning is not, however, an instructional panacea. Glazer and Resnick (1972) and McKeachie and Kulik (1975) indicate that self-directed learning methods are not always more effective than other modes, and this is true even for more structured forms such as contracts and self-paced home study or correspondence courses. The key to maximizing the effectiveness seems to be in matching instructional techniques to particular instructional contexts (e.g., uses to which the learning is to be put) and the particular characteristics of the audience (e.g., degree of experience or knowledge in a particular area).

Experience-based learning is similar to self-directed learning. The distinguishing feature is a high level of student involvement in the learning process. It utilizes resources in the community in achieving carefully planned and agreed upon outcomes. It is also highly personalized to meet students' needs and interests, and it fosters independent learning.

According to Jenks and Murphy (1979), experience-based training has the following assumptions:

- Learners should be moving toward increased responsibility for planning, decision-making, carrying out instructional decisions, and evaluating their own education. Doing so capitalizes on students' interests as well as their potential to be self-directed in learning.

- Students vary in the ways in which learning is most efficient and effective and should have alternative learning activities and resources from which to select.

- Going beyond symbolic learning methods (reading, hearing, and talking about phenomena) to include experience-based techniques (role-playing, simulations, and practice in real contexts, such as the community) enhances the quality of education. (pp. i-ii)

Knowles (1975) discusses the desirability of having a problem-centered orientation for the learning experiences of adults. He suggests that organizing learning experiences around task-accomplishing or problem-solving projects or around inquiry tasks is in keeping with the natural inclination of adults to learn for a specific purpose. Tough (1968) indicates that adults often set out to learn in order to do something: prepare a report, make a decision, solve a problem, handle a case, etc.

Problem-centered learning applied to the upgrading of career skills would be different from the traditional subject-centered learning in a number of ways according to Knowles. It would not proceed from background and theory to practical or field experience. Instead, the curriculum would be organized around the problem areas with which the career area deals. A sequential set of units could deal with problems of increasing complexity. The sequence within each unit would be from field experience to theory and principles to foundation knowledge to skill practice to field application (Knowles, 1973, p. 48).

According to Olmstead (1974) scientists have known for a long time that a person's learning may be facilitated if the individual is working in a group. Olmstead indicates, however, that the use of the small group grew out of practical innovation in the field of adult education rather than

from the application of scientific findings. Instructors found that more conventional techniques such as lectures were less effective for teaching mature students.

Adults dislike instruction presented as dogma and they want an opportunity for discussion and rebuttal. They often become self-motivated when they have opportunity for active participation in the educational process. Small groups are a natural setting for group discussions in which all members of the group can be active and participate. In addition, the small group allows learners to give and receive feedback concernining newly developed ideas. Olmstead most effectively states how group methods can be used to transform knowledge into practical application.

> ...much of the learning to use knowledge in a practical way occurs through interaction between learners, during which concepts, practices, and additional knowledge from past experience can be exchanged, molded, integrated with information from instructors, and formed into a workable frame of reference which can later be applied to problems in the real world. (p. 89)

d. Training for Civil Defense. According to Mulford, Klonglan and Brooks (1970) volunteers need the positive sanctions of their community before they will invest their time and energy in the system. These writers stress the importance of training local coordinators in two civil defense systems: a) the vertical system of increasing levels of responsibility within the civil defense structure and b) the horizontal or community interface system. Both systems, they suggest, can provide the communication and social ties that bring job satisfaction and a sense of belonging to the volunteer. This suggestion could apply to shelter management personnel. In order to feel committed to the system, their role must be well articulated in the civil defense picture and they must be able to sense a certain support within the community. This support need not be widespread, but it should be evident throughout the community's emergency response system.

Several writers (Brictson, Bustya, & Streich, 1967; Dynes and Quarantelli, 1972; and Gordon, Bustya, & Streich, 1966) all emphasize the need for realistic run-throughs or simulations to test community disaster plans and skills. A simulation that integrated all of the functions of civil defense including the shelter system would tend to give meaning and importance to the shelter manager's role and would also provide an opportunity for practicing skills.

Gordon, Bustya, and Streich (1966) made the following suggestions with regard to training for civil defense:

- Make the initial presentation of training material seem closer to the audience's experiential context by using demonstrations that incorporate simulated, narrated, or dramatic elements to precede the more formal academic or technical aspects of the training.

- Train the individual per se as a member of a unit, e.g., as a radiological monitor reporting radiation readings or as a member of a radiological defense unit receiving and evaluating radiological reports.

Brictson, Bustya, and Streich (1967) provide the following suggestion for dealing with the attrition problem: "One solution is to train larger numbers than are actually needed for a particular task, relying hopefully on an adequate turnout when needed." (p. 36) They also suggest cross-training as a method of dealing with the "no-show" problem during emergencies.

Brictson (1963) also emphasizes the need for clarifying objectives and receiving feedback as techniques for motivating trainees.

> There are undoubtedly many factors which serve to influence the attitudes and motivation of a trainee with respect to the training he is receiving. The practice of spelling out training objectives in comparatively small steps and communicating these objectives in advance to a trainee should serve to promote a favorable orientation to the training. When this practice is followed, it enables the trainee to see where he is at any given time, where he is going, and how he is going to get there. To the degree that training objectives are explicitly detailed,

> of training objectives in comparatively small steps should lead to assessment of performance proficiency at frequent intervals. Such assessments permit the correction of trainee errors or misunderstandings which otherwise might persevere until the trainee has the feeling of "being overwhelmed." Even though a trainee may make comparatively few errors and has a good understanding, this technique offers the opportunity to provide positive reinforcement for his good performance, which, in turn, helps promote positive attitudes toward the training. (p. 179)

Brictson recommends that payment be made for volunteer training to increase motivation. Personal contact with trainees, required drill, and greater support from the civil defense system are other measures he suggests for increasing trainee interest and motivation.

e. Discussion of Strategies. The literature relating to volunteer motivation is a sub-set of the adult education literature. Many similar themes can be found throughout each. Adult volunteers enjoy being self-directed and working toward goals they see as relevant, and if possible, have defined for themselves. They bring a lot of experience to the learning situation and have a practical, problem-solving orientation to learning. They want to invest their time and energy in activities that are regarded as important by society in general and by those in particular whose opinions they value. They have social needs and seem to learn best when they have opportunities to share what they ahave learned in a group experience. When the above conditions have been met, they often seek out opportunities to learn on their own. These learner-selected opportunities then serve as motivators to keep the trainee involved in the volunteer system.

The need to provide opportunities for trained shelter managers to refresh and upgrade their skills and the potentially motivating quality of learner-selected opportunities should work together to help solve the volunteer motivation/attrition problem. We need to determine how to make the training relevant to the volunteer's way of thinking and how

to design the training to make it accommodate the trainee's preferred style of learning.

Part of the problem can be solved by recruiting volunteers who have a prior interest or stake in the emergency service/civil defense system. It would be helpful if volunteers and especially, candidate managers, were given the opportunity to form working and social ties within the civil defense system and within the emergency management community. They might feel that they are an integral part of the system if they have the chance to meet and to talk with civil defense people at all levels and with the community's emergency resposne system representatives at meetings, conferences, and training sessions.

The training itself should incorporate as many as possible of the principles of adult education. The information and skills that need to be learned by the competent manager determine the content of a general level, but the application of knowledge and skills will be in contexts that have many variations. These variations can allow for quite a bit of self-direction in training. The manager will be faced with the problem of planning how to meet the demands of the job in his area with its special risks and problems.

Simulation is the method that can make the problem of sheltering populations for nuclear emergencies most immediate and real to the participants. All phases of the simulation experience provide opportunities for learning: planning, carrying out the plans, and evaluating the simulation. If actual simulations cannot be implemented, paper and pencil or game simulations could be used.

It is anticipated that the volunteer shelter manager will often be busy to attend scheduled classes. Independent, self-directed study can compensate for this limitation by allowing the trainee to work in whatever

free time he or she has available. It is important, however, to provide some opportunity for the individual to discuss what has been learned with others who share the concerns of the job. These group sessions will allow the trainee an opportunity to receive feedback and suggestions that can enhance understanding, and at the same time they constitute an important motivational device. Conferences, planning sessions, informal luncheons, and other means of getting people together to discuss problems and to socialize should be explored.

3. Conclusions

The need to provide motivation for the continuing involvement of trained shelter managers in the civil defense system coincides with the need to update and increase the skills of trainees. Training opportunities that allow flexibility with regard to scheduling, location, and pace will serve both needs if they are designed to incorporate principles known to enhance adult learning.

What is required is a well-designed instructional package that includes special skill modules and suggestions for using the modules under three different training conditions (peacetime, crisis expectance, and tactical warning). The organization of content should be problem centered. The presentation should put the trainee into a series of typical problems with which he/she would have to deal during performance conditions. The trainee should be directed to relevant information and encouraged to use his/her past experience in solving the problems.

The training package should be designed to accommodate three basic learning arrangements: an individual working alone, a group working with a participant leader, and a group working with a trained learning facili-

tator. Suggestions for adapting the instructional format to these different conditions can be included in the basis text or in a separate facilitator's guide.

Learning activities should be suggested that provide opportunity for hands-on practice and group discussion. Actual or paper and pencil simulations should be used whenever possible.

Individuals should be allowed to define their own learning needs in relation to the requirements of the job. The trainee should determine, inasmuch as possible, what performance conditions will be like. (What area is the shelter located in? What population characteristics would influence the situation? What are community plans for direction and control for nuclear emergencies?) Given this and other relevant information, the trainee could choose from a variety of objectives and learning sequences those that he/she determines to be necessary for meeting the demands of the job.

In addition to designing learning materials/experiences to have maximum relevance and appeal to adult volunteer trainees, the suggestions below include other motivational strategies for consideration.

1) Providing incentives

- Arrange for trainees to be compensated by their employers (who can deduct the cost of donating their time) while they are receiving training. The trainees would then agree to manage shelters for the organization's needs.
- Allow trainees to receive credit toward college degrees, continuing education units, certificates, etc. for their satisfactory participation and completion of training.
- Provide an income tax credit for successful completion of the initial shelter management training course and subsequent specialized training.
- Reimburse trainees for all out-of-pocket expenses incurred during training.

- Provide attritional incentives for inducing someone else to take shelter management training.

- Provide opportunities for job advancement, seniority credit for undertaking training as a community service.

2) Providing added responsibility

- Arrange for the trained manager to brief neighborhood church, employment, or other groups on the basics of CRP and fallout shelters (attractive visual aids and handouts will help).

- Have trainees design simulated practice situations based on the problems of the community and use these simulations in training others.

CHAPTER THREE:

CONTENT AREAS FOR SHELTER MANAGEMENT TRAINING

Task Area Three: The general bounding of critical content areas in terms of survival potential with the view of suggesting preferred strategies of knowledge synthesis and application development.

A previous analysis which resulted in Models of Shelter Management Training and Delivery Systems (Thomas, et al., 1980) included a content outline for shelter management training based, in the main, on the ANRC manual. That outline is repeated below.

i. sheltering and civil defense
   a. background of civil defense (DCPA, 1979a)
   b. blast protection (Bend, Griffard, Shaner, Shively & Hudak, 1963; Department of the Air Force, 1978)
   c. crisis relocation
      1. congregate lodging facilities
      2. fallout shelters
      3. transition from one facility to another
   d. establishing/maintaining/increasing operational readiness (Bend, Griffard, Shaner, Shively & Hudak, 1963)
   e. other nuclear emergencies (nuclear accidents and terrorist incidents)

ii. organizational structure of congregate lodging facility/fallout shelter
   a. core management roles and responsibilities
      1. manager/deputy manager
      2. deputy for administration
      3. deputy for operational services
      4. deputy for special services
   b. task team duties, responsibilities, qualifications
   c. community groups size and membership
   d. advisory group election and functions

iii. activation of congregate lodging facility/fallout shelter
   a. registration forms and procedures
   b. selection of teams
   c. staff/team leader orientation
   d. floor plans
   e. daily schedules
   f. rules and regulations
   g. initial protective actions for special conditions (DCPA, 1979b; Department of the Air Force, 1978)
   h. other priority actions
   i. special problems

iv. shelter records
    a. shelter log
    b. communications log
    c. radiation monitoring log
    d. shelteree radiation exposure record
    e. records of personal belongings
v. operational services
    a. water requirements and problems
    b. food requirements and problems
    c. sanitation
    d. sleeping arrangements and problems
    e. medical/health care and problems
    f. security/maintaining order
    g. special problems
vi. technical operations
    a. ventilation
    b. upgrading for fallout protection
    c. equipment maintenance and supply distribution
    d. radiological defense
    e. fire safety
    f. escape and rescue
    g. power and lighting
    h. special problems
vii. special services
    a. religious services
    b. recreational services
    c. education/training
    d. psychological support
    e. special problems
viii. emergence from shelter
    a. temporary emergence phase
    b. full emergence phase

This outline and considerations of training priorities has resulted in the following scheme for crisis-expectant period orientation and technical training for managers of congregate lodging facilities and shelter managers.

TABLE 1

CONTENT, MATERIALS AND STRATEGY FOR CONDUCTING SHELTER MANAGEMENT TRAINING

CONTENT AREA	TRAINING EVENT	TRAINEE	TRAINING STRATEGY	MATERIALS	TIME FOR TRAINING
Orientation to ANRC Manual	Orientation Workshop	SM/CLFM	Two-day workshop	• ANRC manual • Instructor's manual • Videotape • Flak Sak • Feedback Sheets	Peacetime for SMO/I's and counterforce area managers; crisis-expectant period for others
Shelter Organization and Leadership (including shelter activation)	Orientation Workshop	SM/CLFM	One-day workshop or self-directed learning	Instructional module with integrated instructions for group facilitator	Peacetime or crisis-expectant period
Radiological Defense	Orientation Workshop	SM	One-day workshop or self-directed learning	Instructional module with integrated instructions for group facilitator	Peacetime or crisis-expectant period
Radiological Monitoring/ Shelter Upgrading	Training Course	SM	One-day technical training session or self-directed learning	Training module	Crisis-expectant or crisis-surge period
Ventilation and Fire Safety	Orientation Workshop	SM	Half-day workshop or self-directed learning	Instructional module with integrated instructions for group facilitator	Peacetime or crisis-expectant period
Ventilation Techniques/ Fire Suppression	Training Course	SM	Half-day technical training session or self-directed learning	Training module	Crisis-expectant or crisis-surge period
Life Support: (power and lighting, water, food, sanitation, sleeping arrangements)	Orientation Workshop	SM/CLFM	One-day workshop or self-directed learning	Instructional module with integrated instructions for group facilitator	Peacetime or crisis-expectant period
Life Support Operations	Training Course	SM	One-day technical training session or self-directed learning	Training module	Crisis-expectant or crisis-surge period
Special Services (medical & first aid, record keeping, security, psychological support, recreation, etc.)	Orientation Workshop	SM/CLFM	One-day workshop or self-directed learning	Instructional module with integrated instructions for group facilitator	Peacetime or crisis-expectant period

CHAPTER FOUR:

SHELTER ORGANIZATION AND LEADERSHIP AND RADIOLOGICAL DEFENSE

Task Area Four: Develop at least two knowledge areas described in the document "How to Manage Emergency Lodging and Fallout Shelters" into much more detailed guidance for the specialist performing the identified function.

Two instructional modules have been completed in prototype form.[1] These two modules organize the guidance necessary to orient shelter managers to the duties and responsibilities, priority operations, central issues and principles, and operational agenda involved in setting up the organizational structure of the shelter and for radiological defense. The two orientation modules that have been completed are titled:

(1) Orientation to Shelter Organization and Leadership

(2) Orientation to Radiological Defense

In this section, a brief outline is provided for the two orientation modules followed by detailed outlines for the technical training modules that should be developed for implementation in a crisis surge period.

---

[1] The prototype modules will be submitted under separate cover.

PRECEDING PAGE BLANK-NOT FILMED

Outline:

An Orientation to
Shelter Organization and Leadership

Introduction

- Overview and Content
- How to Use the Module
- Goals

Activating the Shelter

- Priorities--factors and guidelines involved in deciding what tasks to do first in the functional areas of Administration, Operations, Technical and Special Services
- Overview of Priority Tasks for each Functional Area
- Review

Selecting Staff and Organizing Teams

- Choosing Deputies and Team Leaders-- how to assess capabilities and make staff assignments, responsibilities, qualifications, etc. for leaders and teams in the areas of: administration, security, night watch, safety and rescue, water, food, sanitation, medical, supply, radiological defense, technical operations, ventilation, fire, communications, upgrading, psychological first aid, training and education, support and special services, recreation, and religion. (Summary)
- Review

Shelter Leadership

- Style--leadership style and maintenance of authority
- Guidance--techniques for guiding staff members
- Problem-Solving--types of problems that may occur and approaches for solving them
- Shelter Morale--how to restore and maintain the morale of staff members and the shelter population
- Review

Getting Reading to Get Ready

- Peacetime--procedures for forming shelter management teams, recruiting and selection
- Training--strategies for learning and practicing shelter management skills
- Mobilization--actions to build readiness in a crisis-expectant period
- Review

Suggestions for Further Study

- Publications
- Activities
- Instructor's Notes
- Quiz

Outline:

An Orientation to Radiological Defense

Introduction

- Overview and Content
- How to Use the Module
- Goals

A Rationale for RADEF

- Why the Shelter Manager must know about Radiological Defense
- Who is responsible for RADEF in the shelter
- Review

Radiation and Fallout

- Causes of Radiation--detonation process, nuclear reactions, radioactive particles
- Radiation Dangers--type, penetration, effect, duration, and units of radiation
- Definitions--initial and residual radiation, local and world-wide fallout
- Fallout Patterns--factors affecting speed and distribution of fallout
- Review

Protection

- Upgrading the Shelter--identifying protection factors, identifying safe areas, increasing protective qualities of structures, stopping leaks
- Decontamination--procedures for decontaminating people entering and protecting people who must leave the shelter
- RADEF Equipment--survey meters, dosimeters, training instruments
- Review

Effects of Radiation

- Estimating Radiation Exposure--rationale and procedures
- Reducing Exposure--procedures to cut down on amount of exposure received in shelter, and guidelines for deciding who can be allowd to risk more
- Radiation Sensitivity--guidelines for predicting who is most likely to be harmed by radiation
- Results of Exposure--effects of varying degrees of exposure on the human body
- Treating Radiation Sickness--symptoms and treatment
- Review

RADEF and Shelter Management

- Relative Importance of RADEF--guidelines for weighing priority of RADEF and other shelter activities
- Leaving the Shelter--role of RADEF in deciding shelter emergence
- Review

Suggestions for Further Study

Publications
Activities
Instructor's Notes
Quiz

OUTLINE

SHELTER MANAGEMENT TECHNICAL MODULES

NAME: PREPARING FOR SHELTER LEADERSHIP

PURPOSE: To provide 6-8 hours of technical training and a review/orientation on a shelter manager's responsibilities in the areas of: (a) activating the shelter, (b) selecting staff and organizing teams, (c) working with shelter personnel, and (d) maintaining an effective management climate.

INSTRUCTIONAL STRATEGIES:

FORMAT:

- One booklet, 8 1/2 by 11, three-hole punched, spiral bound.
- Approximately 60 pages.
- Divided into chapters, units, and frames of semi-programmed instruction. Each frame will contain: orientation material, material to be learned, guidance, response, and feedback.

TEACHING STRATEGY:

- Large step, self-administering programmed instruction.
- Directions embedded in the booklet for group administration either by a trained or untrained instructor.

INSTRUCTIONAL FEATURES:

- Learner objectives are stated.
- Linear format, no branching.
- Material is presented in fairly large frames (1/2 to 2 pages) oriented around tasks, operations, duties, or techniques.
- Instruction is focused on skills more than knowledge or attitudes.
- Feedback is provided.
- Application/simulation items extend learning and provide for realistic practice.
- The writing should take a first person tone.

OBJECTIVES:

Section One: Activating the Shelter

1. The learner will be able to recall the twelve priority steps listed on pages F14-15 of the Red Cross Manual (RCM), using a mnemonic device.

2. The learner will be able to use the RCM to find information about the twelve priority steps as the information occurs in other sections of the Manual.

3. Given a set of descriptions, the learner will be able to revise the list of priority steps by suggesting additional steps, deleting steps, and revising priorities, based upon such factors as:

   --short warning time (an hour or less), moderate warning time (a day or less), or long warning time for shelter activation.
   --prior selection and training of deputies or no prior selection and training of deputies.
   --number of people assigned to the shelter.
   --adequacy of supplies and shielding.
   --shelter configuration and size.

Section Two: Selecting Staff and Organizing Teams

4. The learner will be able to list all staff management positions.

5. The learner will be able to identify generally the responsibilities of management staff positions.

6. The learner will be able to use the RCM to specify management position responsibilities.

7. The learner will be able to assess capabilities and make staff assignments given complted (sample) registration cards, using such guidelines as:

   --previous experience related to tasks
   --amount of time to complete tasks
   --degree of match with qualifications listed in RCM for each position (F16, F19)

8. The learner will be able to identify possible task team responsibilities based on consdierations such as:

   --services provided in the shelter
   --special populations in the shelter
   --essential upgrading tasks

9. The learner will be able to use the RCM Functional Teams Chart (RCM F19ff) as guidelines for qualifications, size of teams, and priority of selection.

10. The learner will be able to revise early staff and team selections on the basis of observations about performance in order to establish a permanent shelter team.

11. The learner will be able to describe in a general way how the shelter is organized, with lines of authority and approximate numbers of people at each level, using the Sample Organization Chart on page F26 as an example.

Section Three: Working with the Shelter Staff

12. The learner will be able to write a set of procedures for a given operational area.

13. The learner will be able to instruct deputies about how to inform their cadre about procedures using such guidelines as:

    --selecting appropriate media (signs, oral announcements, etc.)
    --maintaining an optimistic tone
    --scheduling regular briefings

14. The learner will be able to describe methods for coordinating individuals or groups involved in various activities within the shelter, according to such guidelines as:

    --balancing needs
    --priority of activity
    --keeping as many people busy as possible

15. The learner will be able to identify potential problems, given a situational description, and present strategies for dealing with them.

16. The learner will be able to establish a system for monitoring operations within the shelter, given a set of descriptions, using such guidelines as:

    --assessing the source of information
    --making direct observations and relying on staff reports
    --scheduling monitoring activities

17. The learner will be able to describe methods for resolving conflicts, using such guidelines as:

    --establishing a grievance procedure
    --being consistent in actions
    --considering effects of conflict upon shelter survival
    --maintaining a "positive" atmosphere in the shelter
    --listening carefully to both "sides"

Section Four: Maintaining an Effective Leadership Climate

18. The learner will be able to identify his/her own leadership "style."

19. The learner will be able to identify his/her strengths and weaknesses.

20. The learner will be able to demonstrate leadership by using guidelines like:

    --visibility
    --projecting confidence
    --establishing authority immediately

21. The learner will be able to present methods for maintaining morale in the shelter, based on such guidelines as:

    --awareness of effectsof stress upon self and population
    --awareness of cultural and ethnic differences among population
    --awareness of emotional climate within shelter population

22. The learner will be able tp present strategies for countering rumors within the shelter.

23. The learner will be able to develop a personal strategy for establishing and maintaining control of the shelter.

OUTLINE FOR THE MODULE

INTRODUCTION: To contain:

- General goals of the module.
- Overview of/context for the module.
- How to use the module: individual and group.

SECTION ONE: ACTIVATING THE SHELTER

1. Provide a brief review of each of the first and second priority duties.
2. Provide practice in distinguishing first from second priorities.
3. Provide practice in distinguishing CLF from FS priorities.
4. Provide for the retention of the first priority steps through the use of a mnemonic aid.
5. Provide a summary of the factors that will affect the shelter activation period process and guidelines for reacting to these factors.
6. Provide a series of exercises which call for the learner to design strategies that he will follow for adding to, deleting, or modifying priority steps according to factors such as shelter size, time constraints, nature of emergency, type of sheltered population.
7. Provide a series of "open-book exercises" where learners devise strategies for the following activation operations: controlling traffic, initiating registration activities, taking formal control of shelter operations, assigning space, establishing facilities, (communications, sanitation, water, medical care, food), conducting inventories.

SECTION TWO: SELECTING STAFF AND ORGANIZING TEAMS

8. Provide for the retention of general management staff and team duties.
9. Provide for the matching of shelter team positions to ideal type experience/knowledge qualification descriptions.
10. Provide for the interpretation of and guidelines for the use of the shelter registration forms for selecting candidate management personnel.
11. Provide a set of general guidelines for staff and team selection and a set of factors which may influence these tasks; have the learner select from these factors and guidelines in order to design selection strategies adaptive to a series of hypothetical scenarios (including differential responses for team composition, size, and purposes).
12. Provide guidelines and exercises simulating an early (hasty) team selection situation and ask the learner to make adjustments.

SECTION THREE: WORKING WITH THE SHELTER STAFF

13. Provide a review of the basic procedures for activating a shelter, using the descriptions in the RCM, such as:

    --ventilation
    --registration

14. Provide practice in developing procedures, using the RCM and a set of descriptions of shelter variables like:

    --preparation time
    --size of shelter
    --resources of shelter

15. Provide a review of possible communication techniques and media uses.

16. Provide a set of exercises where learners present oral directions to others in clear concise ways.

17. Provide a description of operations to be accomplished and have learners design appropriate methods for instructing staff.

18. Provide a review of basic problem-solving strategies.

19. Provide a series of exercises that call for the learner to identify potential problems and present strategies for dealing with them.

20. Provide a description that illustrates the importance of monitoring operations within the shelter.

21. Provide a set of descriptions that call for the learner to present a plan for monitoring operations within the shelter.

22. Provide a review of methods for resolving conflicts.

23. Provide practice in designing strategies for resolving conflicts, using case histories and situations.

SECTION FOUR: MAINTAINING AN EFFECTIVE LEADERSHIP CLIMATE

24. Provide a review of the leadership "styles" of various well-known leaders.

25. Provide exercises that allow learner to identify his/her own "style," and compare with others.

26. Provide practice in identifying individual strengths and weaknesses, using checklists, observations, etc.

27. Provide a review of methods for demonstrating leadership in the shelter.

28. Provide a series or exercises that call for learner to display strategies for demonstrating leadership in a shelter, using a set of descriptions.

29. Provide a review of potential causes of loss of morale within the shelter.

30. Provide practice in designing methods for maintaining morale, using case history descriptions.

31. Provide practice in countering rumors within the shelter through a series of exercises that call for the learner to devise strategies for eliminating rumors or dealing with those that occur.

SECTION FIVE: GROUP STUDY EXERCISE (SIMULATION/ROLE PLAYING)

32. Provide a simulation that can serve as an application exercise for the learnings in the module and/or as the central activity of a one-day, leader-led training session.

    Materials should include: introduction to the purpose and procedures of the simulation; role descriptions and material describing the shelter, its facilities and supplies, the external situation, etc; registration forms; simulated action material, such as announcemnts from the local EOC, additional role instructions, and situation reports.

    In the simulation, learners take the roles of a group of people who must form the staff of a fallout shelter. The Shelter Manager is chosen by lot at the beginning of the exercise. After the shelter is "opened," the Manager must select a temporary and then a permanent staff. Role instructions for the various staff members allow a variety of personnel problems to arise which the shelter manager must deal with. Problems presented by the situation materials also must be solved by the manager and staff.

    Following the simulation, learners and instructor should discuss what happened and how the actions taken could have been improved.

OUTLINE

SHELTER MANAGEMENT TECHNICAL MODULE

NAME: PREPARING FOR RADIOLOGICAL DEFENSE

PURPOSE: To provide 6-8 hours of technical training and a review/briefing on the shelter manager's responsibilities in the areas of: a)radiological defense; b) radiological monitoring; c) working with the RADEF team; and d) emergence from the shelter.

INSTRUCTIONAL STRATEGIES:

FORMAT:
- One booklet, 81/2 by 11, three hole punched, spiral bound
- Approximately 80 pages
- Semi-programmed, divided into sections. The sections can stand alone and contain: orientation material that puts the lessons in context; material to be learned; mastery response items; feedback; application items or problems to be solved; feedback.

TEACHING STRATEGIES:
- Present material, elicit response, provide feedback.
- Present application/problem, elicit response, provide feedback.

INSTRUCTIONAL ARRANGEMENTS:
- Individual: self-paced,
- Group: with Leader/Facilitator or without Leader/Facilitator.

INSTRUCTIONAL FEATURES:
- Learner objectives are stated,
- Pretests allow students to delete lessons where mastery is demonstrated,
- Material is presented in large chunks organized around a major topic, function, or time period,
- Mastery items test objectives,
- Feedback is provided for mastery items and simulated problem solutions,
- Application/simulated problem items extend learning.

OBJECTIVES:

1. The learner will be able to describe how radioactive fallout is produced and distributed following a nuclear weapon burst.

2. The learner will be able to name the three kinds of radiation produced by a nuclear weapon burst and describe the hazards to living organisms of each type.

3. The learner will be able to apply the principle concerning the relationship between the dose of radiation and the time during which the dose was received in assessing the danger of simulated cases of exposure to radiation.

4. The learner will be able to describe the symptoms and treatment for a range of simulated cases of exposure to radiation.

5. The learner will be able to place simulated cases of people of various ages and conditions into radiation sensitivity categories and use this information for making simulated decisions.

6. The learner will be able to state the principles and describe specific actions for increasing the protective capability of the shelter given simulated information.

7. The learner will be able to describe the purpose of the survey meter, the dosemeter charger, and the dosemeter.

8. The learner will be able to describe the necessary steps for using the three instruments used for monitoring the radiation levels in the shelter.

9. The learner will be able to interpret simulated information from the two instruments used for monitoring radiation levels in the shelter.

10. The learner will be able to demonstrate correct radiation exposure recording methods given simulated information.

11. The learner will be able to estimate the arrival and decay of fallout given simulated information.

12. The learner will be able to describe appropriate techniques for working with the RADEF team in the shelter.

13. The learner will be able to describe actions to take if there are no trained RADEF personnel assigned to the shelter.

14. The learner will be able to describe how to decontaminate people and supplies.

15. The learner will be able to list tasks to be done before the fallout arrives.

16. The learner will be able to describe a plan for locating people in the best protected areas of the shelter.

17. The learner will be able to compose a message for informing shelterees about the radiation hazard for a simulated set of circumstances in a fallout shelter.

18. The learner will be able to list and describe procedures to use in watching for fallout.

19. The learner will be able to describe methods for keeping the exposure of all persons in the shelter to safe limits.

20. The learner will be able to describe how to find the lowest radiation levels in the shelter.

21. The learner will be able to describe how to find and repair radiation leaks in the shelter.

22. The learner will be able to list things that should be done after the fallout has stopped comming down.

23. The learner will be able to apply rules for using the dosemeter, the Penalty Table, and other information for making decisions about radiation exposure and emergency missions.

24. The learner will be able to use rules for forcasting the radiation exposure for the first 24 hours and for estimating the length of the shelter stay.

25. The learner will be able to describe methods for determining radiation levels beyond the immediate shelter area.

26. The learner will be able to make decisions concerning temporary emergence from the shelter given simulated information about external radiation conditions.

27. The learner will be able to make decisions concerning final emergence from the shelter based on simulated data.

OUTLINE FOR THE MODULE

INTRODUCTION: To Contain:

- General goals of the module
- Overview of the module
- Student objectives
- How to use the module: individual
- How to use the module: group administration
- Pre-test for all mastery items

SECTION ONE CONTENT:

Provide information about how fallout is produced and distributed; characteristics and hazards of alpha, beta, gamma radiation.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts.

SECTION TWO CONTENT:

Provide information about the relationship between radiation dose and exposure time; the symptoms and treatment for varying levels of whole body short term exposure, and radiation sensitivity categories.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts. They will apply their understanding by reading and writing comments concerning descriptions of ways of managing simulated cases of individual exposure.

SECTION THREE: CONTENT:

Present information about barrier shielding for fallout radiation and techniques for upgrading to increase the protective capacity of the fallout shelter.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts. They will apply their understanding by describing and diagraming a plan for upgrading a facility for fallout protection.

SECTION FOUR:

CONTENT:

Present information about the purpose of the survey meter, the dosemeter, and the dosemeter charger, the steps necessary for preparing the instruments for use and for interpreting the data yielded by the instruments.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts. If possible, they will have guided practice in the procedures involved in operating the instruments. The students will apply their understanding by interpreting simulated information from the instruments used for monitoring radiation in the shelter.

SECTION FIVE

CONTENT:

Present information about factors that influence the arrival of fallout and methods of estimating when it will arrive at a given location, the 7:10 rule for predicting radiation level after fallout has arrived.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts. Students will apply their understanding by forcasting the arrival of fallout and predicting the level of radiation from simulated data.

SECTION SIX

CONTENT:

Present information about the work of the RADEF team and the manager's responsibilities in working with them to effect radiation safety in the shelter; actions to take if no trained RADEF personnel are assigned to the shelter.

OPERATIONS:
Students will read information and answer multiple choice and short answer questions to test their understanding of the manager's responsibilities. They will describe a plan for choosing and training a RADEF team given simulated data concerning shelter occupants and conditions.

SECTION SEVEN:

CONTENT:

Present information about decontamination procedures for people, water, food, etc.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts.

SECTION EIGHT: CONTENT:

Present information about the radiological safety measures to be taken before the arrival of fallout including: locating people in the best protected area of the shelter; organizing the sheltered population into units for radiological protection; checking out the shelter; checking the instruments; informing the people in the shelter about radiation hazards and protective actions.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the concepts. They will apply their understanding by reading simulated data about conditions in a shelter prior to the arrival of fallout and listing actions to take in order of priority.

SECTION NINE: CONTENT:

Present information about procedures to use in watching for fallout.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions to test their understanding of the information. They will demonstrate understanding by listing appropriate actions given simulated information regarding number and distance of explosions, wind direction, etc., and making simulated 'entries' in a simulated shelter log.

SECTION TEN: CONTENT:

Present new information and review previously learned information concerning methods for keeping the exposure of all persons in the shelter to safe limits including: decontaminating people caught in fallout; finding places with the lowest radiation levels in the shelter; finding and repairing radiation leaks in the shelter; gamma shielding by people; keeping records of individual and group exposure levels.

OPERATIONS:

Students will review previously learned information about decontamination; using monitoring instruments; using the Penalty Table; and recording exposure. They will read about finding and repairing radiation leaks; gamma shielding by people; and about applying all of these procedures to situations that are likely to occur as fallout is comming down. They will then respond to a set of simulated problems by choosing the best course of action from a set of choices and describe why it is the best coice. They will also make 'entries' of events in a simulated shelter log.

SECTION ELEVEN: CONTENT:

Present information about: things that should be done after fallout has stopped comming down; forcasting radiation expos-

ure for the first 24 hours and estimating the shelter stay; using the Penalty Table as a guide for making decisions about radiation exposure, emergency missions outside the shelter, etc.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions. They will demonstrate their understanding by responding to simulated problem situations with written 'solutions' or actions to be taken. They will enter all actions and events in a simulated shelter log.

SECTION TWELVE: CONTENT:

Present information on problems and considerations relevant to temporary and final shelter emergence including: determining radiation levels beyond the immediate shelter area, total exposure level of individuals in the shelter, etc.

OPERATIONS:

Students will read information and answer multiple choice and short answer questions. They will test their understanding by responding to simulated conditions relevant to temporary and final emergence from the shelter by choosing and commenting on a simulated manager's response chosen from a set of possible actions.

CHAPTER FIVE:

OTHER INPUT RELATING TO KNOWLEDGE SYNTHESIS AND APPLICATION OPPORTUNITIES

Task Area Five: Provide limited effort in conceptualizing application strategies, state of knowledge papers, and other input relating to knowledge synthesis and application opportunities.

In this area, three tasks were carried out. A draft position paper was developed relevant to knowledge production and utilization drawing primarily upon the educational and training literature.

Second, an input paper was developed for the Interactive Research Symposium No. 2, conducted at EMI, May 5-7, 1981. A copy of this paper is attached as an Appendix to this report.

Third, a program outline was developed for Interactive Research Symposium No. 3, addressing the education and training domains of lodging and sheltering.

References

Banathy, B. H., Haveman, J. E., Robinson, D. S., Chesluk, C., & Stein, D. Linking formal and nonformal education sectors for their advancement. San Francisco: Far West Laboratory for Educational Research and Development, 1977.

Beach, H. D. Management of human behavior in a disaster. Ottowa, CAN: Department of National Health and Welfare, 1967.

Bend, E., Griffard, C. D., Shaner, A. J., Shively, A. M., & Hudak, V. M. Guide to shelter organization and management. Pittsburgh, PA: American Institutes for Research, 1963.

Brictson, R. C. Innovations and improvements in civil defense. Santa Monica, CA: System Development Corporation, July, 1963.

Brictson, R. C., Bustya, C., & Streich, E. R. A model local civil defense training plan: An organization and training development research study. Santa Monica, CA: System Development Corporation, 1967.

Chenault, W. W. & Davis, C. H. Reception/care, planning, guidance for host communities, Vols. I, IV. McLean, VA: Human Sciences Research, Inc., 1976.

Covington, M. V. & Berry, R. G. Self-worth and school learning. New York: Holt Rinehart, and Winston, 1976.

Defense Civil Preparedness Agency. Guide for increasing local government civil defense readiness during periods of international crisis. Washington, D.C.: DCPA, 1979.

Department of the Air Force. Technical training: Fundamentals of disaster preparedness (shelter management). Washington, D. C.: 1978.

Dynes, R. R. & Quarantelli, E. L. A perspective on disaster planning. Washington, D.C.: DCPA, December, 1972.

Federal Emergency Management Agency. Statement of training and education requirements. Washington, D. C.: FEMA, 1980(a).

Federal Emergency Management Agency. U.S. crisis relocation planning (Plans and Preparedness Report #7). Emmitsburg, MD: 1980(b).

Glaser, R. & Resnick, L. B. Instructional psychology. In P.H. Mussen & M. R. Rozenzweig (Eds.) Annual Review of Psychology, 1972, 23, 207-276.

Gordon, J. J., Bustya, C., & Streich, E. R. A state civil defense training plan: An organization and training development research study. Santa Monica, CA: Systems Development Corporation, 1967.

PRECEDING PAGE BLANK-NOT FILMED

Haines, M. Volunteers: How to find them . . . how to keep them! Vancouver: VARC, Feb., 1977.

Ilsley, P. Voluntarism: An action proposed for adult educators. In J. A. Niemi and E. M. Stone (Eds.) Voluntarism at the crossroads: A challenge for educators. Hillside, IL: Proceedings of a Conference, Feb., 1978.

Ingalls, J. D. A trainer's guide to andragogny. Waltham, MA: Data Education, Inc., 1973.

Jenks, C. L. & Murphy, C. Overview to experience-based learning and the facilitative role of the teacher: Book 1. San Francisco: Far West Laboratory for Educational Research and Development, 1979.

Knowles, M. S. The modern practice of adult education: Andragogny versus pedagogy. New York: Association Press, 1970.

Knowles, M. S. Self directed learning: A guide for learners and teachers. New York: Asoociation Press, 1975.

Leidecker, J. K. & Hall, J. J. Motivation: good theory -- poor application, Training and Development Journal, 1974, 28, 6, 3-7.

Leppert, A. Voluntarism: State of the art. In J. A. Niemi (Ed.), Voluntarism at the Crossroads: A challenge for adult educators. Hillsdale, IL: Proceedings of a Conference, Feb., 1978.

Little, A. D. Volunteer services. Prepared for the Office of Juvenile Justice and Delinquency. June, 1978 ED 177 376.

Maehr, M. C. Continuing Motivation: An analysis of a seldom considered educational outcome. Review of Educational Research, 1978, 46, 443-462.

Main, K. "The power-load margin formula of Howard Y. McClusky as the basis for a model of teaching." Adult Education, 1979, 30, 19-33.

McClusky, H. Y. The adult as learner. In R. J. McNeill & S. W. Seashore (Eds.), Management of the urban crisis. New York: The Free Press, 1971.

McKeachie, W. S. & Kulik, J. A. Effective college teaching. In F. N. Kerlinger (Ed.), Review of research in education 3. Itasca, IL: Peacock, 1975.

Mulford, C. L., Klonglan, G. E., & Brooks, R. M. Training local coordinators: Implications for civil defense. Iowa State University, IW: Sept., 1970

Newitt, J. & Singer, M. Increasing peacetime utility of civil defense. Croton-on-Hudson, NY: Husdon Institute, March 31, 197.

Niemi, J. A. & Stone, E. M. (Eds.) Voluntarism at the crossroads: A challenge for educators. Hillside, IL: Proceedings of a Conference, Feb., 1978.

Olmstead, J. A. Small group instruction: theory and practice. Alexandria, VA: Human Resources Research Organization, 1974.

Pell, A. R. Recruiting, training, and motivating volunteer workers. New York: Pilot Books, 1977.

Penland, P. R. Self-planned learning in America. Pittsburgh: Graduate School of Library and Information Sciences, University of Pittsburgh, 1977.

Randall, J. S. You and effective training: Part 2 -- The Learning Process. Training and development journal, 1978, 32, 6, 10-12.

Schindler-Rainman, E. & Lippitt, E. The volunteer community: Creative use of human resources. (Second Edition) La Jolla, CA: University Association, Inc. 1977.

Sullivan, R. J. & Heller, W. M. Civil defense needs of high risk areas of the United States. Arlington, VA: Systems Planning Corporation, 1979.

Thomas, J. W. Agency and achievement: Self-management and self-regard. Review of Educational Research, 1980, 50, 213-240.

Thomas, J. W., Studebaker, D. P., Hecht, J. C., & Banathy, B. H. Models of shelter management training and delivery systems. Final Report, DCPA 01-79-C-0248. San Francisco: Far West Laboratory for Educational Research and Development, 1980.

Tough, A. Why adults learn: A study of the major reasons for beginning and continuing a learning project. Monographs in Adult Education. No. 3, toronto, CAN: Department of Adult Education, the Ontario Institute for Studies in Education, 1968.

Wilson, M. Volunteer programs. Boulder, CO: Volunteer Management Associates, 1976.

APPENDIX

PRECEDING PAGE BLANK-NOT FILMED

THE DEVELOPMENT OF HUMAN CAPABILITIES NEEDED TO FACILITATE CRISIS RELOCATION AND SHELTERING/RECEPTION: ORGANIZATIONAL OUTREACH THROUGH EDUCATION AND TRAINING

by

Bela H. Banathy

Far West Laboratory for Educational
Research and Development

April, 1981

Table of Contents

An Executive Summary

The goals of the symposium and Dr. Perry's behavioral analysis provide the context for my discussion. I suggest that the attainment of operational readiness for a crisis-expectant period is dependent upon prior training covering a wide range of capabilities for crisis relocation and sheltering/reception as well as the development of associated attitudes and dispositions. I suggest further that role training, and especially role training conducted in functional contexts, would enable us to create "standby mechanisms" for appropriate responses in a crisis situation and that these mechanisms can serve as a substitute normative system during and after periods of crisis.

First, I briefly review design requirements of an educational and training system for a crisis-expectant period. Crisis-expectant education refers to the development of awareness and knowledge about crisis-related civil defense policies and procedures, appropriate (to a crisis) preventive and responsive behaviors and anticipated events and emergencies. Crisis-expectant training, on the other hand, refers to instruction in self-help, survival skills, and procedures that must be acquired through practice and guidance.

The characterization of crisis relocation and sheltering/reception education and training is the main topic of my presentation. I shall develop the characterization in six components:

1. Audience characteristics are examined within a framework consisting of five categories: environment, expertise and position, resources to respond, psycho-social factors, and special considerations.

2. Context variables include considerations of warning time, the extent of the attack, and the degree to which we can prepare to respond.

3. Required behaviors refer to what individuals and groups should be able to do in a crisis situation. A behavioral model is presented that portrays specific behaviors appropriate to the different time periods.

4. Education and training content is proposed under two broad categories, namely: what is likely to happen (characteristics of a nuclear explosion; what the relocation and sheltering/reception plan is, etc.); and what people should do (how to build and stock shelters, how to participate in crisis relocation, and how to handle medical emergencies, radiatiological monitoring, etc.).

5. Instructional considerations include: (a) instructional arrangements (how the target audience should be organized for instruction); (b) time options (peace time, crisis-expectant period, and crisis and recovery); and (c) methodological options (instructional strategy, media choice, and learning arrangements).

6. Delivery and institutionalization is concerned with approaches and arrangements to deliver a great variety of crisis response related education and training to an even greater variety of audiences and target groups at various time periods. The use of "host" institutions is proposed through interorganizational linkage and coordination arrangements.

In closing, I introduce a framework that members of the symposium might use to explore options and resolutions relevant to nuclear emergency education and training.

The Development of Human Capabilities Needed to Facilitate Crisis Relocation and Sheltering/Reception: Organizational Outreach Through Education and Training

Bela H. Banathy
Far West Laboratory for Educational
Research and Development

In the course of my discussion, I intend to introduce images of an organizational outreach program that are derived from (1) the goals of this symposium, (2) the crisis-period behavioral characterizations developed by Ron Perry, and (3) the emergency management related R&D experience and knowledge base we have acquired at the Far West Laboratory.

I have developed my contribution in four parts: (1) The Functional Context (of the paper), (2) An Overview of Education and Training for Crisis-Expectant Period, (3) A Characterization of Crisis Relocation and Sheltering/Reception Education and Training, and (4) Options and Resolutions.

A. The Functional Context

The functional context of my discussion has been established first, by Ralph Garrett's introduction and the goals of the symposium, and second, by Ron Perry's behavioral analysis.

The symposium seeks to: (1) better define the problem of reception, care, and sheltering of relocated populations; (2) assess the strategy for formulating the state of knowledge into application modes that would be used over time to achieve greater operational readiness in a crisis-expectant period; and (3) define research and application needs.

The immediate source of my discussion is the characterization of human behavior during crisis relocation presented by Ron Perry. The major sources of my discussion are displayed in Figure 1.

SYMPOSIUM GOALS:

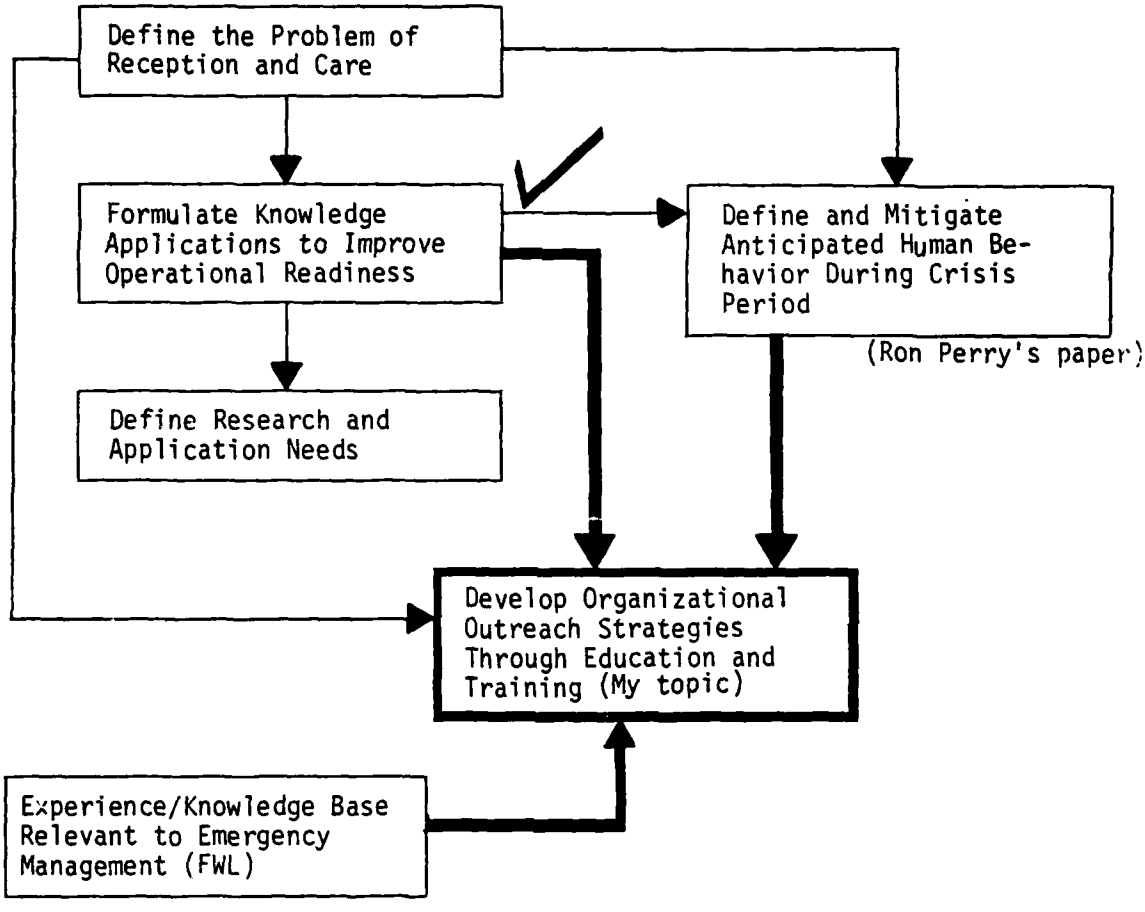


Figure 1. Sources and their relationship.

Ron Perry (1981) has provided us with a characterization of human behavior in a crisis period as a function of radical change in the environment and in social conditions. Ron made the point that lack of prior experience with nuclear hazards must generate a high degree of "reflexive fear," making compliance with protective measures, as well as the disposition to be cooperative, more likely. He suggests that we can capitalize upon this responsiveness and channel it in productive directions.

Perry's review of emergent norm theory indicates that much can be done in the way of creating "standby mechanisms" for appropriate response that can serve as a substitute normative system during and after periods of crisis. He proposed four criteria for such a system, namely, (1) a defined structure, (2) provisions for role training, (3) a well-designed process of dissemination, and (4) a plan of action that is highly visible and perceived as effective (by the public).

The characterization and criteria described above are the salient points of departure for developing an image of an outreach program which operates through education and training. Figure 2 displays these points. The characterization and system criteria that Ron has developed provides us with the behavioral theory base needed by an educational intervention program, i.e., these features constitute valuable input information--for a curriculum designer interested in constructing educational and/or training programs relevant to nuclear emergencies.

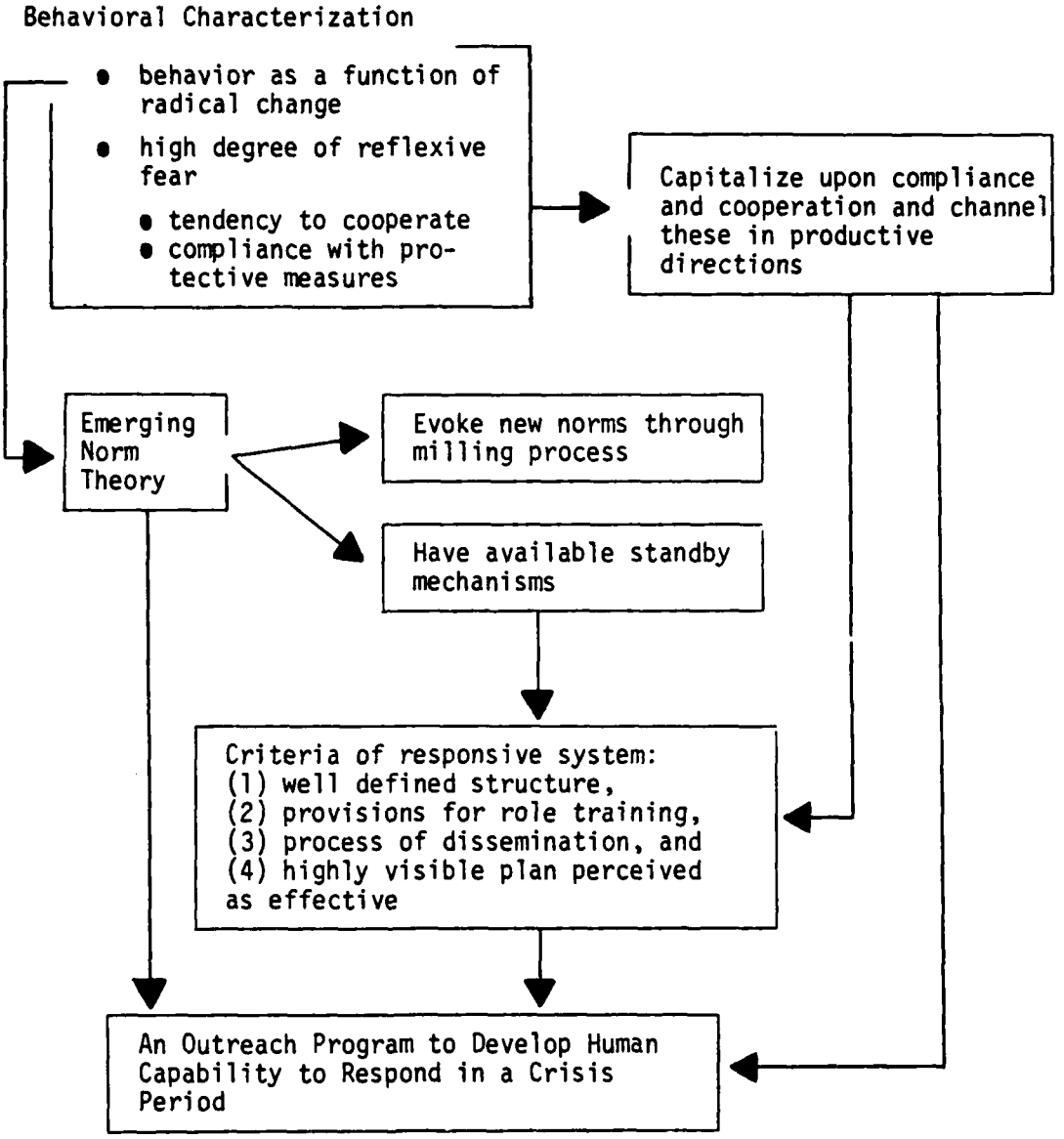


Figure 2. Behavioral characterization and criteria of a rasponsive system.

B. An Overview of Education and Training for a Crisis Expectant Period

The possibility of a nuclear crisis, whether precipitated by international conflict or by accidental causes, is as strong today as it ever has been. The necessity for having systems available that are capable of informing and training the U.S. public in a crisis situation has long been recognized by civil defense planners and by concerned citizens. In a crisis, our survivability as a nation may depend on the extent to which the public knows what to do and the degree to which responsive actions are carried out swiftly and effectively.

Yet, despite the survival value of civil preparedness information and skills, no comprehensive system exists for providing education and training for the U.S. public either prior to or during a crisis situation. Recent presidential directives calling for mass relocation planning for major population areas heighten the need to develop an educational and training system that is responsive to current emergency management policies and procedures. In this section of my presentation I will briefly review the design requirements of an educational and training system for a crisis-expectant period. (For details, see Thomas, et al., 1980). An essential content component of such a system is education and training aimed at the development of human capabilities to facilitate crisis relocation and sheltering/reception.

1. A Definition of Crisis-Expectant Education and Training

A crisis-expectant period is defined as a period of heightened public concern during which a crisis is anticipated. The crisis might be a nuclear attack from a hostile country, nuclear warfare between other countries, a terrorist threat, or an accident at a nuclear plant or installation. A crisis-expectant period might begin with an announcement from the President or through public recognition that a threat has emerged. Such a period ends

with an announcement that an emergency situation is imminent and an order to take some defensive action, such as relocation.

The term, "crisis-expectant education," refers to the development of awareness and knowledge about various topics relating to the crisis, civil defense policies and procedures, appropriate preventive and responsive behaviors, and anticipated events and consequences. "Crisis-expectant training," on the other hand, refers to instruction in skills and procedures that cannot be adequately conveyed without some provision for practice and guidance. Together, they constitute a crisis-expectant education and training system, referred to as "CEETS."

2. A Review of the Need for Crisis-Expectant Education and Training

CEETS essentially addresses the need to increase the survivability of the U.S. population in time of crisis and/or attack. Although an attack is unlikely, current arsenals and the proliferation of nuclear weapons among non-aligned countries make a policy of readiness for nuclear attack prudent. The current civil defense strategy places primary emphasis on crisis relocation--an organized relocation of the almost 140 million people who live in risk areas (areas which are of sufficient military or economic importance to be likely targets) to safer locations.

However, the task of relocating such large numbers of people during a crisis ranks in complexity with the most extensive military campaign. The following comments indicate the kind of preparation and training that would be necessary:

- Experience in peacetime is to the effect that success in large-scale evacuation requires competently developed plans. (DCPA, 1979d, p. 18)
- It appears likely that more enlightened and willing support and participation of the public at large will be essential to survival and recovery regardless of the success of civil government in planning to meet its functional responsibilities. (Dunlap & Assoc., 1965, p. 7)

- Should an extremely severe crisis find the U.S. . . . unprepared . . ., there could be significant or serious reactions on the part of the population. It is certain that there would be demands for specific survival advice and instructions by the bulk of the public. (DCPA, 1979a, p. 57)

Thus, well developed relocation plans and their interpretation to the public, and specific crisis response and survival instructions are important elements of an effective education and training system.

Certain civil preparedness responses will require time for practice and guidance. It is unlikely that people could be briefed effectively about shelter construction techniques, shelter stocking considerations, and relocation preparation procedures if instructions were left to the last minute. Instruction in these kinds of skills and procedural competencies would be better attempted before or in the early stages of a crisis situation.

> Furthermore, even a highly intelligent citizen, if given the best possible instructions during a crisis, would not have time to learn basic facts about nuclear dangers and the reasons for various survival preparations. . . . A prudent citizen is advised to obtain and study the best instructions available before a crisis occurs. (Kearny, 1979, p. 3)

Finally, even a quick review of the need for a crisis-related education and training program would not be complete without mention of the strategic significance of civil relocation capabilities, specifically in reference to an imbalance between the U.S. and the U.S.S.R. (Huntington, in Christiansen, et al., 1979) The achievement of a credible relocation capability requires quick, effective education and training and a comprehensive approach to the deployment and implementation of an education and training system: such problems in a peacetime environment require both careful research and informed imagination.

> Effective preparedness will always involve the planned use of relatively limited resources to prepare for a future planned use of relatively extensive resources. Nowhere is this principle more apparent than in the programming of public information and training efforts. Instructional material and messages must, essentially, be designed in one environment for rapid, effective use and dissemination in another. (Carr, 1976, pp. 80-81)

A central problem in designing an education and training system is the uncertainty regarding the situation for which the training must be designed. Because the United States population has never been confronted with a major nuclear war or disaster, there are no case histories available for use as a guide. Therefore, in designing an education and training system, certain assumptions must be made such as the following:

- Current civil defense policies (based on CRP) will remain in force for the immediate future (at least ten years).
- All major areas will have developed crisis relocation plans by the beginning of the crisis-expectant period.
- Local communities will be aware of these plans, and will be able to disseminate crisis information relevant to their areas.

C. A Characterization of Crisis Relocation Sheltering/ Reception Education and Training

The consideration of six programmatic components defines the characteristics of a relocation and sheltering/reception education and training system. These are: the nature of the target audience; the context (setting and condition) in which the system will be used; the behaviors needed for appropriate response; the education and training content that facilitates the acquisition of desired behavior; the medium and mode of learning; and program delivery. In this section, I will briefly discuss these components and portray their relationships.

1. The Audience

The population of the United States is currently estimated at over 230 million people. About 70 percent of this figure is made up of adults, that is, those considered legally capable of conducting their own lives. This means that the potential audience for nuclear crisis education and training consists of approximately 156 million men and women.

In order to define the training needs and requirements of an audience of this size, a framework within which to identify the characteristics of the audience must be considered. The following categories represent the beginning of such a framework:

- environment--whether the audience is located in a risk or host area, and whether its population will be relocating or not;
- expertise and position--an individual's previous familiarity with civil preparedness information/skills, and his/her organizational connections;
- resources--the presence or absence of physical, financial, or social resources affecting a person's ability to respond to an emergency; and
- psycho-social factors--values and attitudes, learning abilities, reactions to stress, and other relevant factors.
- special considerations--language, handicaps, age, health problems, etc.

Any given individual might be described as simulatenously belonging to subgroups in all of these categories. In designing training, it is important to consider the implications of all of the learner's associations and relationships.

2. Context Variables

Education and training for civil preparedness must be flexible and broad enough to include both probable and possible variations in the context of a nuclear emergency. Three major types of variables which may be identified are: the amount of warning time before an attack; the extent of the attack and the nature of the targets; and the degree to which the community or nation is prepared to respond. In a given emergency, any combination of variations from each dimension could exist, defining both the threat and the appropriate response. These dimensions and variations are displayed in Figure 3.

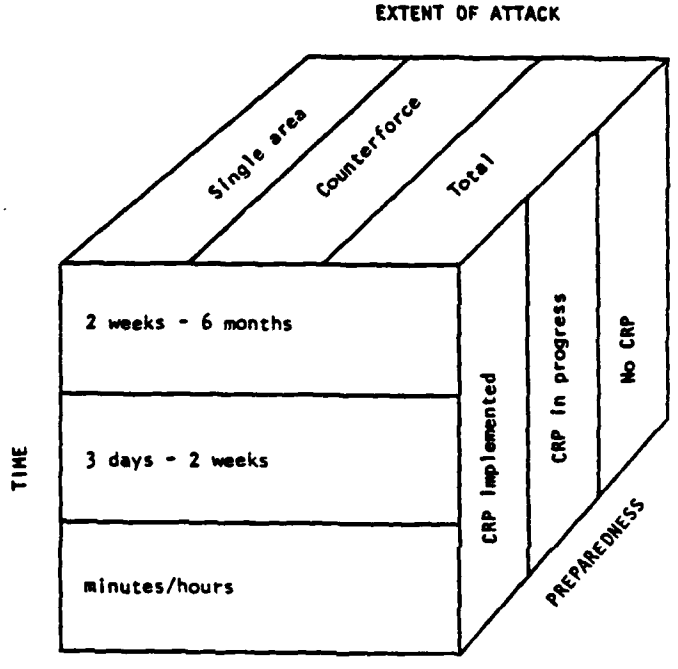


Figure 3. Context variables.

The nature and significance of each of these variables will be considered in the design of education and training programs for crisis relocation, sheltering/reception education and training.

3. Required Behaviors

The questions of when, where, and for whom the education and training system would be used have been discussed previously. The purpose of this section is: (1) to explore the question of what individuals and groups should be able to do in response to a nuclear disaster; (2) to consider behavior in relation to various time periods; and (3) to construct a behavioral model.

a. Individual Survival. Studies of human response to natural disasters, technological accidents, and previous wartime experiences have provided a body of experience from which qualified inferences may be made regarding the kinds of behavior needed to cope with the effects of nuclear war. The one behavioral requirement that is continually associated with individual survival in this literature is adaptiveness. According to Dunlap & Associates (1965),

> to be effective, an individual's actions will have to be adaptive in three ways: (1) he will be confronted with previously unencountered requirements, and (2) he will have to perform, at least temporarily, certain functions previously performed for him by society, or (3) he will have to adapt to unsatisfied needs. (p.16)

Some of the survival behavioral requirements for the individual noted by Dunlap & Associates include:

- avoiding hazards (radiation, contaminated food and water, disease, injury);
- conserving resources (food and water, clothing, medical supplies, shelter, service materials);
- seeking self-sufficiency in health (energy conservation, sleep, rest, temperature control, mental, first aid); and
- making provisions for dependents. (pp. 18-19)

Perry et al. (1980) examine the response of individuals to the changed environment of a crisis and conclude that preparedness programs act as standby mechanisms for people.

> Human behavior in disaster can be conceptualized as nontraditional behavior in response to a changing or changed social and physical environment. In this context, preparedness programs, such as CRP, can be thought of as "nontraditional behavior patterns" (i.e., a standby mechanism) designed to cope with particular changes in the environment which are "called up" in the event of a crisis. (p. 38)

In this domain some required crisis management behaviors include:

- confirming the warning message;
- assessing the risk to oneself and one's family; and
- assessing the logistics of one's options for responding to the warning.

Perry et al. conclude that it is likely that individuals will comply with the request to relocate if they perceive the threat as real, if they perceive the level of personal risk as high, and if they have an adaptive plan immediately available.

b. Societal survival. Dunlap and Associates (1965) distinguish between behaviors that facilitate individual survival and behaviors that facilitate societal recovery. As elaborated upon by Bobrow (n.d.),

> the survival of the United States when nuclear attack is possible does not simply mean preserving lives and property, what we call physical survival. It also means preserving the pieces, i.e., lives and property, in the relationships we associate with the American system, what we will call societal survival. This crude and artificial distinction serves to remind us that physical survival is a necessary but not a sufficient condition for America to continue as a democratic and economically abundant society in the nuclear world environment. (p.2)

Societal survival behaviors mentioned by Dunlap and Associates (1965) that might be the focus of an education and training program include:

- exhibiting a willingness to try to understand national and local post-attack circumstances, recovery plans, and requirements imposed on the public;
- exhibiting a willingness to forego short-term interests of oneself and one's family in order to participate in recovery measures to assure the long-range interests of the group; and
- acquiring the knowledge and capacity to act intelligently and cooperatively to support the recovery of the community. (pp. 21-22)

c. Behavioral considerations in relation to time. Peacetime and the different crisis-related periods may require different types and levels of behavioral responses.

(1) Peacetime. During peacetime, there will be a few inquiries from some concerned people, librarians, and school personnel concerning what to do in a crisis. Information that might be considered appropriate for peacetime includes: (a) directions for constructing or upgrading shelters; (b) detailed

instruction on technical aspects of nuclear emergencies; and (c) procedures for training others in various aspects of civil preparedness.

(2) Crisis-expectant period. During the beginning of a crisis period, the population begins to be concerned. Most of the population will begin to seek out information about what's likely to happen. Although some training may take place during this time, most of the population will concentrate on gaining knowledge they might need later. This includes:

- knowledge about nuclear possiblities:
  - target areas
  - blast and radiation effects
  - what the protection options are;
- knowledge of how the warnings will be communicated;
- procedures for establishing reliable messages;
- knowledge of how CD operates and of how local government will be functioning during the crisis;
- knowledge of local routes, transportation options, and shelter locations; and
- knowledge of how to begin acquiring supplies for sheltering or relocating.

(3) Crisis-activation period. As the crisis progresses, and especially during the height of the surge, the population will need information on what to do and where to go. The information requirements become locally specific during the later stages of the crisis-expectant period and include the following:

- rules for responding appropriately and quickly to warning signals;
- instructions for building a shelter (blast, fallout, expedient) and for upgrading shelters;
- suggestions for stocking shelters;
- knowledge about living in a group shelter;
- knowledge about CRP in general, and destination and route information in particular;

- rules and procedures for solving problems when there is no specialist available, i.e., first aid, radiation/fallout monitoring and decontamination, and fire prevention and suppression; and
- procedures for securing homes.

(4) Recovery period. If an attack occurs, the population must be given information and training, both while they are in the shelter and later when they emerge, that will help them to survive in the new world. Behavior requirements for this period of education and training include:

- acquiring the skills necessary to survive in the post-attack environment;
- locating food and water and other supplies;
- assisting in self-government efforts;
- constructing shelters;
- improvising power sources; and
- participating and cooperating in the new way of life.

In addition to the knowledge and skills required to perform the behaviors cited above, members of the U.S. adult population will need to acquire certain dispositions and attitudes necessary for their survival and for the recovery of society. Specifically, they will need to:

- accept responsibility for their own survival;
- believe in the efficacy of protective measures;
- believe that it is necessary to cooperate;
- be willing to share with others; and
- be willing to learn new skills.

d. The behavioral model. Table 1 presents a behavioral map divided into knowledge, skills, and affective behaviors. These domains are further divided into those areas which should apply to everyone and those which will have to be tailored to meet the needs of specific populations or localities. The

TABLE 1

A BEHAVIORAL MODEL OF A CRISIS-EXPECTANT EDUCATION AND TRAINING SYSTEM

TYPES OF INSTRUCTION / PERIODS FOR INSTRUCTION		CRISIS EXPECTANT	CRISIS ACTIVATION		RECOVERY	
			Relocation	In-Shelter	No Attack	Post Attack

Knowledge (The learner needs to understand or to know that...)	GENERAL	• Orientation to Civil Defense
		  • Current policy
		  • Rationale for
		• Types of emergencies, and effects, precautions, consequences
		• Warning systems and other information sources
		• Crisis relocation procedures
		  • Where to go
		  • How to go
		  • What to take
		• What to expect
		  • Crisis activation
		  • Shelter living
		  • Recovery
			• What to take
			• What not to take
			• What to expect
			• General CRP plan
				• Shelter procedures and rules
				• Fire suppression information
				• Radiological monitoring information
				• First aid information
					• Sources of relief
					• Procedures for return
						• Radiation and fallout effects
						• Finding supplies
						• Organizing to start over

	TAILORED	• Location of local shelters
		• Local evacuation routes
		• Local transportation options
		• People to contact for
		  • More information
		  • Special information
		• What to expect locally e.g., who will give the command
		• Targets
			• Precise shelter locations for all
			• Precise routes
			• Precise transportation options
			• Updated information on what to take
			• Upgrade shelter
					• Transportation routes	• Current radiation/fallout information
						• Procedures and rules for emergence

Operations/Skills (The learner needs to be able to...)	GENERAL	• Develop a family preparation and response plan • Stock a family shelter • Administer first aid • Respond appropriately to contingencies that may follow • Distinguish reliable from unreliable information • Build an expedient shelter	• Formulate plan for shelter entrance • Construct expedient shelter • Upgrade shelter	• Upgrade shelter • Monitor radiology • Formulate family/neighborhood recovery plan • Suppress shelter fires • Assist in first aid • Assist in shelter operations		• Locate food and water • Assist in forming self government • Construct new shelter • Assess contamination • Improvise power sources
	TAILORED	• Follow any special local pre-relocation instructions (e.g., put coded sign on vehicle		As required by shelter manager		
Affective Behaviors (Be disposed to; show attitude of; be committed to belief in...)		• Accept responsibility for survival • Accept value of CRP and CD • Believe in efficacy of protective measures • Believe in importance of cooperation • Show realistic attitude toward consequences of attack	• Be willing to share • Be willing to cooperate	• Be willing to learn new skills • Cooperate	• Be willing to return to normalcy	• Be able to adapt to new life • Participation • Cooperation

information requirements are then presented as training needs specific to the crisis-expectant, crisis-activation, and recovery periods.

4. Educational and Training Content

Having considered the behaviors which an education and training system should facilitate or foster, the question to ask next is: What content can be identified and communicated to the learner so that the desired behavior will be acquired through an educational/training program? The answer falls into two broad categories: what is likely to happen (how CD operates, what a nuclear explosion will be like, what the relocation and sheltering/reception plan is, etc.); and what adults should do in response to what might happen (how to build and stock shelters, how CR will work, and how to handle problems like medical emergencies, radiation monitoring, and fire suppression).

In order to identify the realm of possible content areas, we analyzed pamphlets, manuals, sourcebooks, etc., on nuclear emergencies, and recent technical documents and policy statements. These sources provided the basis for content listing; displayed in Tables 2 and 3.

TABLE 2

CONTENT RELEVANT TO WHAT
IS LIKELY TO HAPPEN

I. A Nuclear Scenario
   - A. How an attack might start
   - B. What would happen
   - C. Risk areas of the U.S.
   - D. A checklist of emergency responses

II. The U.S. Civil Defense System
   - A. Goals of Civil Defense
   - B. Civil Defense agencies and organization
     1. National
     2. Local and state
   - C. Comparisions with other CD systems
     1. Soviet
     2. European
   - D. U.S. Civil Defense policies
     1. CRP overview
        a. Definitions and terminology
        b. Strategy
     2. Shelters as defense: overview
        a. Public
        b. Private
   - E. Effectiveness of CD
     1. Cost Effectiveness
     2. Life-saving effectiveness
     3. Attitudes of population toward CD

III. Nuclear Emergencies and Hazards
   - A. Statistics
     1. Weapons advances since WWII
     2. Countries possessing nuclear weapons
   - B. Types of Nuclear Emergencies
     1. Definition
     2. Range of emergencies
        a. Nuclear testing fallout
        b. Terrorist activities
        c. Industrial accidents
        d. Nuclear war
   - C. Effects of Nuclear Weapons
     1. Nuclear energy overview
     2. Effects of nuclear weapons
        a. Blast
        b. Thermal effects
        c. Radiation
        d. Fallout
        e. Health
        f. Social effects
   - D. Possibilities for survival
     1. Time
     2. Distance
     3. Shielding
     4. Decontamination
     5. Sheltering

IV. The U.S. Under Nuclear Attack
   - A. Time frames
     1. Crisis Period
        a. Crisis Expectant Period
        b. Crisis Surge Period
        c. Crisis Attack Period
        d. Recovery Period
     2. Warning Time Frame
   - B. Warning Systems and Signals
     1. Systems
        a. Ballistic Missile Early Warning System (BMEWS)
        b. North American Air Defense Command (NORAD)
        c. National Warning System (NAWAS)
        d. Community alert
        e. Official public warnings
     2. Signals
        a. Alert signal
        b. Attack warning signal
        c. Responses to attack warning signal
     3. Emergency Public Information
        a. Media involved
        b. Information given

V. Survival and Recovery
   - A. The country after a nuclear attack
     1. The quality of life
     2. Public health
     3. Industries and utilities recovery
     4. Environmental recovery
     5. Social systems recovery

TABLE 3

CONTENT RELEVANT TO RESPONSE TO A NUCLEAR CRISIS

I. The Crisis Relocation Plan
   - A. Overview questions
     1. Who will go where:
     2. How long will it take?
     3. Where will people eat and sleep?
     4. How long will people stay?
   - B. Shelters
     1. Public shelters
     2. Private shelters
        - a. Permanent shelters
        - b. Improvised shelters
   - C. Risk and Host Areas
     1. Overview
     2. Spontaneous evacuation
     3. Those who remain
   - D. Direction and Control
     1. Transportation possibilities
     2. Controlling the relocation
     3. Information needs
        - a. Pets
        - b. Medical problems
        - c. Securing the home
   - E. Reception and Care
     1. Overview description
     2. Special problems
   - F. CRP in Action
     1. Case Histories
     2. Community plans

II. The Shelter System
   - A. Overview
     1. Surveying and Marking
     2. Provisioning
     3. Managing
     4. Organizing
   - B. Taking Shelter in the Risk Area
     1. Shelter Requirements
     2. Improvising Home Shelter
     3. Stocking a Home Shelter
     4. Finding an Expedient Shelter for Blast Protection
     5. Sheltering Outdoors
   - C. Taking Shelter in the Host Area
     1. Making the host area ready
     2. Knowing how to get there
     3. Knowing what to take
     4. Considering alternatives to the host shelter
   - D. Survival in Rural Areas
     1. Residential Shelters
     2. Animal Shelters

III. Shelter Living
   - A. Arrival Actions
   - B. Life-support needs
     1. Upgrading the shelter
     2. Ventilation
     3. Sanitation
     4. Food and water
   - C. Psychological needs
   - D. Radiological needs
     1. Protection
     2. Monitoring
     3. Decontamination
   - E. Protection against fire
     1. Prevention
     2. Suppression
   - F. First Aid needs
   - G. Communications

IV. Life outside the Shelter
   - A. National economy
   - B. Risk-Area commuting
   - C. Social order/disorder

V. Emergence from the Shelter
   - A. Precautions
   - B. Radiation problems
     1. Fallout residues
     2. Decontamination
   - C. Emergence
     1. Temporary
     2. Permanent

5. Instructional Considerations

The next consideration to be discussed is that of how crisis-expectant education and training is to be presented. Out of an array of instructional media, methods, and modes of delivery, those which will be most feasible and effective must be selected. To do this, some of the factors already looked at in previous sections will be reconsidered with respect to instructional options.

a. Audience options. The first question to be investigated is that of how the target audience should be organized for instruction. Some possibilities include the following:

- Instruction could take place in groups that are based on locality, e.g., according to neighborhoods or the location of the shelter they would occupy.
- Audiences could be instructed according to functional interests: that is, those interested in first aid could receive that training, while others would be instructed about stocking the shelter, registering incoming risk-area people, and so on.
- Adults could be educated according to what their family or community responsiblities are. Those with children in schools, for example, might be instructed through that institution, while others might receive training through a community agency or through their place of employment.
- Adults could be instructed in linguistic groups.

A related possibility is based on the idea that an education and training program need not reach everyone directly but could use intermediaries. This would involve training a selected group from the community who would then be responsible for educating or training others during a crisis. In addition, radio and TV station personnel could be prepared to disseminate information on emergency survival knowledge and techniques over the media during a crisis.

At some point, however, it is necessary to reach everyone in the population with emergency education. The education and training system should therefore be flexible enough to include content and presentation appropriate for everyone. Local civil preparedness personnel involved in public information and training should be prepared as well to provide locally tailored information and training suitable for the audience in their area.

b. Time options. By definition, education and training will focus on the crisis-expectant period. However, for the system to be complete, it should also consider what kinds of training and education might be needed or feasible in the peacetime, crisis surge, and recovery periods.

(1) Peacetime. There appear to be both advantages and disadvantages associated with preparing people for an emergency in peacetime periods. Many researchers argue against mounting major civil preparedness campaigns during peacetime. For example:

> Civil defense is a low-salience issue, especially because the awesomeness of a nuclear disaster elicits a common popular response to any disaster-preparedness message--the denial of the possibility as long as the environment allows such a denial. (Sullivan et al., 1979, pp. 126-127)

Further, Bend et al. (1966, pp. 19-21) point out that information which is perceived as having little salience has little impact. In several studies, they found that the only people who even noticed the civil defense information being transmitted to them were those who were already interested and favorably disposed toward civil defense.

On the other hand, it has been argued that prior exposure to information about the hazards and responses to nuclear war can increase the salience of information. Furthermore, pre-exposure to emergency plans can sensitize people to those plans and increase compliance during a crisis (Perry et al., 1980). Dunlap & Associates (1965) cite some additional advantages of civil preparedness education in peacetime:

- educational facilities and materials are widely available;
- the population is highly mobile and can reach training facilities;
- the basic needs of the population are already satisfied, freeing their attention for training;
- there are no time constraints on training length or sequencing;
- instructors are available and mobile;
- training can reach people who might leave the area once a crisis approaches;
- trained people can train others during a crisis-expectant period; and
- homogeneous training populations can be identified and reached.

The steady sale of emergency information materials and the continuing interest in survival-oriented courses offered by the Red Cross and other training institutions indicate that there is a small but interested audience for emergency preparedness, even in peacetime.

(2) Crisis-expectance. There is general agreement that in a crisis-expectant period, education and training is likely to be well-received. During this period,

> the public at large is more prepared to "tune in" to the civil defense message, and more likely to follow shelter guidance. (Bend et al., 1966, p. 31)

A study by the Systems Planning Corporation (Sullivan et al., 1979, pp. 127-128) describes public reaction during a crisis-expectant period according to the following sequence of behaviors: (a) stress, eventually reaching very high levels, (b) information-seeking behavior, geared to personal survival, and (c) coping behavior to relieve stress. In a crisis-expectant period, this sequence could recur several times, involving successively larger percentages of the population.

However, it must be recognized that an increase in pressure accompanies an increase in saliency. This places a strain on the resources of the civil defense system at a time when it is already fully extended in implementing crisis plans. Potential problems in delivering crisis training at such a time include the following (Bend et al., 1966, p. 31):

- shortage of time--courses developed for longer periods may have to be squeezed into a few hours;
- difficulty of coordination when so many other activities have to be accomplished; and
- overreaction on the part of some members of the population, leading to dysfunctional behavior and adding to the confusion.

It is absolutely essential that the information which the public receives during such a time be consistent and comprehensible, otherwise the civil defense system may lose essential credibility (Sullivan et al., 1979, pp. 128-129).

(3) Crisis and recovery. During the crisis-activation and crisis surge periods, the major items of information would include specific directions regarding what to do and updates describing what is happening. These communications would be necessarily brief and would be distributed on the assumption that receivers already have a certain amount of basic knowledge concerning risks and hazards (Bend et al., 1966)

Education for recovery could take place during the sheltered period and would probably be conducted by shelter managers. Studies conducted during the 1970's indicated that significant portions of the Emergency Broadcasting System (EBS) could be expected to survive an attack (Haaland et al., 1976), and could provide essential information during the recovery period.

c. Methodological options. Instructional methods concerns include teaching strategies, media, learning modes and arrangements, instructional sequencing, and instructional resources.

(1) Instructional strategy. The criteria for selecting an instructional strategy should take into account:

- the type of learning (e.g., information learning, principle learning, skill acquisition, etc.);
- the criterion task (e.g., filling out a form vs. organizing a team of people);
- the nature of the learners--their personal characteristics, experience and present circumstances; and
- the constraints imposed by the context in which the instruction will take place. Types of constraints include: time, location, nature of trainers, number of people trained, facilities/financial support.

Stated differently, selecting an instructional strategy is a matter of maximizing the following criteria: Effectiveness: How well can the method achieve the instructional objective? Efficiency: Does the strategy get the most out of the available resources? Suitability: How appropriate is the strategy for the trainees, the training context, and the criterion task content? Feasibility: Given the constraints that have been identified, can it be done?

(2) Media choice. The population will want information quickly and will need specific information presented in the most understandable, memorable way. The medium must be able to satisfy these needs. Given the range of media possibilities for the education and training of adults during the crisis period, some consideration must be given to the selection of media. Gerlach and Ely (1971) suggest the following criteria for selecting appropriate media (pp. 292-296): Appropriateness, Level of Sophistication, Cost, Availability, Technical Quality. Level of sophistication, for example, is considered by

Dunlap and Associates (1965) in their recommendation that all printed materials stockpiles in shelters be designed for a sixth-grade reading level.

Perry et al. (1980) underline the importance of the media choice in maintaining that the medium of the warning message influences the hearer's action. Accordingly, when the medium is viewed as authentic and the threat is perceived as real, more people are likely to act upon the warning.

The current civil defense plan is to broadcast over mass media the President's explanation for the order to relocate. Specific details such as routes, destinations, and protective action will come from state and local civil defense officials in verbal modes while maps and other visual information will be placed in newspapers.

(3) Learning arrangement. The possibilities for grouping and assembling learners are seriously restricted by the crisis context within which instruction must take place. During an extended crisis-expectant period, some provision for self-directed group instruction or team learning is both possible and feasible. Such arrangements might be especially valuable when concerted community actions are needed, i.e., evacuating an institution, upgrading a lodging facility, or coordinating transportation.

It is also essential that self-study learning arrangements be available to individuals by way of reading materials and mediated messages. Family-focused instruction and guidance materials directed to one family member who instructs other members is also a possibility.

6. Delivery and Institutionalization

A major predicament faced by FEMA is the requirement of delivering a great variety of emergency response training and education to an even greater variety of audiences and target groups in various time periods with a very limited and restricted "built in" delivery and implementation capacity.

It is necessary, therefore, to seek ways by which T&E program, audience, and time period variants can be matched with delivery and implementation mechanisms, arrangements, and systems appropriate to those variants.

It was suggested (Banathy, et al., 1977) that the meeting of such requisite varieties can be accomplished through the use of a variety of institutions and organizations that are components of formal and informal educational systems; public, private and community agencies; volunteer and youth agencies, etc. Using existing organizations as "hosts" for nuclear emergency related education and training entails the design of delivery systems by which E&T can be made available to specific target groups and audiences by the introduction, infusion, and institutionalization of appropriate E&T into the program of the "host" institution. A delivery system is a system of structural arrangements, procedures, methods and materials, and evaluation feedback networks that enable an educational program to be introduced to, infused within, and utilized by an organization. A generic formulation of such a system has been developed, along with a generic concept of a society-level organization of education (Banathy, 1980). Such generic models/concepts may guide us in generating the arrangements and procedures unique to FEMA and to the institutions to which the E&T program is to be delivered. An earlier project provided an example of a pre-planning process to determine what delivery system is simultaneously appropriate to the goals of DCPA and of two educational agencies that have impact on a large segment of the youth population (Banathy, et al., 1975).

The education and training program, once infused into selected institutions, would be available to educate a large variety of target groups both during peacetime as a low level activity and in crisis-expectant periods as a highly intensive program.

I should stress here that program delivery through host institutions requires the creation and maintenance of institutional and personal commitments. Commitment is established, in part, through negotiations to develop the specific arrangements best suited to the host institution, and to the needs of the target groups.

Arrangements for delivering E&T programs through host institutions has to be complemented by devising methods and means to transmit crisis-related public information. According to Dunlap and Associates (1965), time is the most important element in such transmission. They suggest that training materials be "on hand, ready for use prior to the actual crisis situation." These materials then can be delivered through a variety of channels, such as:

- newspaper articles (series extending through crisis period);
- educational television presentations;
- radio programs directed toward individual countermeasure activities;
- special news presentation of similar disaster situations (presented over television networks); and
- home disaster packages.

Distribution of the home disaster package could be achieved by using supermarkets, local mailing lists, school children, or welcome wagons. They note that "such home packages, even if not read upon receipt, would serve as ready references for possible future use" (p. 52).

Additional E&T and information delivery concerns include:

- how to provide for the guidance and practice necessary to teach such skill-laden competencies as constructing expedient shelters;
- how to provide for the expansion of the E&T system between and within crisis time periods;
- how to provide for the refinement and tailoring of E&T materials and procedures to fit special audiences and contexts;
- how to provide for the immediate activation of the E&T system in a crisis situation;

AD-A105 600 FAR WEST LAB FOR EDUCATIONAL RESEARCH AND DEVELOPMENT--ETC F/G 5/1
KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING--ETC(U)
SEP 81 J W THOMAS, J C HECHT, D P STUDEBAKER EMW-C-0295

UNCLASSIFIED NL

END
DATE FILMED
1 81
DTIC

- how to establish a dissemination capability for E&T messages and materials; and
- how to insure that the E&T system undergoes continued monitoring and evaluation.

Designing options and solutions for satisfying these delivery requirements and institutionalizing nuclear crisis-response education and training systems are major tasks that we need to address with much diligence. The accomplishment of these tasks is a challenge and an issue of high priority for FEMA. This symposium can make a unique contribution toward meeting this challenge by formulating organizing perspectives that can shape our thinking as to how to approach the requisite tasks.

D. Consideration of Options and Resolutions

In my presentation, I first examined the relationship between the content of my discussion and the overall goals of the symposium and created specific linkages with Ron Perry's presentation. I then introduced an overview of education and training relevant to a nuclear crisis. In the main body of the paper, I characterized crisis relocation and sheltering/reception education and training in terms of: audience characteristics, context variables, behavioral specifications, E&T content, instructional considerations, and delivery and implementation issues.

In closing, I introduce a profile that participants of the symposium may use to consider options relevant to E&T and to prepare potential resolutions based on these options. The profile is presented in Table 4.

TABLE 4

CONSIDERATION OF OPTIONS AND RESOLUTIONS
(Topics for Discussion)

System Requirements	Given	Sample Options	Sample Resolutions
• Audience (whom to teach)	All U.S. adults	Directly or via others? What about special populations?	System should first address those who are reachable and influential, while addressing others with specific media.
• Time (when to teach)	Peace-time, crisis-expectant, crisis-activation, and recovery periods	CE period only vs. provision for peacetime, crisis activation, and recovery periods.	Focus on CE and activation periods and indicate what components could also be used in other periods.
• Context (type of disaster)	Nuclear war	Include other nuclear emergencies and/or other major disasters requiring crisis relocation.	Focus on general information about nuclear attack; mention other nuclear emergencies; and refer to other disasters for illustration
• Knowledge content	Knowledge for surviving a nuclear war, especially what to do, where to go, what to expect	Focus on cooperating with FEMA (CRP, ORP, etc.) vs. personal survival; relocation vs. in-place survival.	Emphasize FEMA's role and survival value of CRP; but cover other responses as well.
• Skills content	Everyone must have appropriate skills	Emphasize cooperation vs. self-reliance, individual vs. social survival? Train for familiarity vs. proficiency in survival skills?	Emphasize skills needed for survival in group situation; provide training in self-reliance skills as an option.
• Affective content	People can survive a nuclear emergency	Motivate by stressing danger vs. focusing on people's survival capability?	Cautious optimism: show dangers, but also show solutions.
• Method of presentation	A variety of methods and approaches are needed	Group instruction (with or without trainers) vs. individual mode; self-directed vs. team learning format?	Focus on self-directed mode with built in capability for team learning.
• Mediation	System must be able to be activated/expanded quickly	Print materials only or multi-media?	Develop print modules; design multi-media package and trainer's guide as supplements.
• Delivery/ Institutionalization	FEMA does not have its own E&T system; but has delivery responsibility	Build a national system; capitalize upon existing "host" institutions; or create linkages?	Negotiated, formalized arrangements for using "host" institutions. Regional learning system notion.

References

Banathy, B. A study of external training settings available to diffuse civil preparedness public instruction, final report. San Francisco: Far West Laboratory for Educational Research and Development, 1975.

Banathy, B. Systems inquiry in education. In L. Rubin, (Ed.) Curriculum handbook. Boston: Allyn & Bacon, 1977.

Banathy, B. (co-author), Critical issues in educational policy. Boston: Allyn and Bacon, Inc., 1980.

Bend, E., Cohen, S., & McDaniel, C. Public information and knowledge requisites of a shelter system, final report. Pittsburgh: American Institutes for Research, 1966.

Bobrow, D.B. Civil defense and American survival. Oak Ridge, Tenn.: Oak Ridge National Laboratory, n.d.

Carr, F. State of the art: Shelter management research (Vol 1) (Research Report No. 23). Washington, D.C.: Defense Civil Preparedness Agency, 1968. Revised and edited by Ralph Garrett, 1976.

Christiansen, J.R., Kimbrell, E., & Rockwood, S. Guidance for sharing residential space during emergencies, final report. Provo, Ut.: Brigham Young University, 1979.

Defense Civil Preparedness Agency. Civil defense for the 1980's. Current issues. In-House Paper. Washington, D.C.: Author, 1979 (a)

Defense Civil Preparedness Agency. Questions and answers on crisis relocation planning (Information Bulletin No. 305). Washington, D.C.: Author, 1979 (d).

Dunlap and Associates, Inc. Training requirements for post-attack adaptive behavior, final report. Darien, Conn.: Author, 1965.

Gerlach, V.S., & Ely, D.P. Teaching and media. Englewood Cliffs, N.J.: Prentice Hall, 1971.

Haaland, C.M., Conrad, C.B., & Wigner, E.P. Survival of the relocated population of the U.S. after a nuclear war. Oak Ridge, Tenn.: Oak Ridge National Laboratory, 1976.

Kearny, C.H. Nuclear war survival skills. Oak Ridge, Tenn.: Oak Ridge National Laboratory, 1979.

Perry, R.W., Lindell, M.K., & Green, M.R. The implications of natural hazard evacuation warning studies for crisis relocation planning. Seattle, Wash.: Battelle, 1980.

Perry, R.W. Human behavior during crisis periods: Crisis relocation as a standby mechanism. Seattle, Wash.: Battelle, 1981.

Sullivan, R.J., Hulburt, C.W., Marshall, M.O., McCormick, G.H., & Sager, E.V. Civil defense needs of high risk areas of the United States. Arlington, Va.: System Planning Corp., 1979.

Thomas, J.W., Studebaker, D.P., Bradish, M. & Banathy, B.H. A model for education and training for a crisis-expectant period, final report. San Francisco: Far West Laboratory for Educational Research and Development, 1980.

June 1981

MANDATORY STANDARD DISTRIBUTION LIST FOR RESEARCH REPORTS
(ALL PROJECTS)

(Number of Copies - One unless otherwise indicated)

Federal Emergency Management Agency
Plans and Preparedness
Studies, Research and Development
ATTN: Program Operations
Washington, D.C. 20472 (70)

Assistant Secretary of the Army (R&D)
ATTN: Assistant for Research
Washington, D.C. 20301

Chief of Naval Research
Washington, D.C. 20306

Defense Technical Information Center
Cameron Station
Alexandria, Virginia 22314 (12)

Oak Ridge National Laboratory
ATTN: Librarian
P.O. Box X
Oak Ridge, Tennessee 37830

Los Alamos Scientific Laboratory
ATTN: Document Library
Los Alamos, N.M. 87544

The RAND Corporation
ATTN: Document Library
1700 Main Street
Santa Monica, CA 90401

SPECIAL DISTRIBUTION
(This report only)

Human Sciences Research, Inc.
ATTN: William Chenault
Westgate Research Park
7710 Old Springhouse Road
McLean, VA 22101

Mr. Robert Vessey
American Red Cross
18th & D Streets, N.W.
Washington, DC 20006

Mr. Roy Popkin
Disaster Services
American Red Cross
18th & D Streets, N.W.
Washington, DC 20006

Division of Emergency Management
Department of Crime Control
and Public Safety
116 West Jones Street
Raleigh, NC 27611

Mr. John Miller
Organization 23509
The Boeing Corporation
P. O. Box 3994
Seattle, WA 93124

Dr. Charles Fritz, Executive Secretary
Committee on Emergency Management
National Academy of Sciences
Room JH-732
2101 Constitution Ave., N.W.
Washington, DC 20418

Dr. Jiri Nehnevajsa
University Center for Social
and Urban Research
4A25 Forbes Quadrangle
University of Pittsburgh
Pittsburgh, PA 15260

Mr. Michael Kaltman
U. S. Nuclear Regulatory Commission
P302
Washington, DC 20555

Mr. Robert W. DeFayette
Division of Emergency Preparedness
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Disaster Research Center
Ohio State University
127 West 10th Avenue
Columbus, OH 43201

Dr. Ronald Perry
Battelle Human Affairs
Research Centers
4000 N.E. 41st Street
P.O. Box C-5395
Seattle, WA 98105

Walter E. Strope
Center for Planning and Research
5600 Columbia Pike
Falls Church, VA 22041

Mr. Arnold Grunsky
Public Security Building
State Campus
Albany, NY 12226

Prof. John Christiansen
Department of Sociology
834 SWKT
Brigham Young University
Provo, UT 84602

Ms. Elizabeth E. Eicherly
Pennsylvania Emergency
Management Agency
151B Transportation Safety Building
Capitol Complex
Harrisburg, PA 16802

Mr. Joseph Hein
New York State Office of
Disaster Preparedness
Public Security Building
State Campus
Albany, NY 12226

James F. Miskel, Executive Officer
Office of Family Assistance, HHS
200 Independence Ave., S.W.
Washington, DC 20201

2-Special Distribution

Lynne I. Heneson-Walling
Office of Human Development Services
DHHS
200 Independence Ave., S.W.
Washington, DC 20201

Ms. Bonnie J. Young
Storm Preparedness Coordinator
Coastal Area Planning and
Development Commission
P. O. Box 1316
Brunswick, GA 31521

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

Unclassified

Far West Laboratory for Educational Research and Development
September 30, 1981, 102 pages, EMW-C-0295, Work Unit 4422E

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

Unclassified

Far West Laboratory for Educational Research and Development
September 30, 1981, 102 pages, EMW-C-0295, Work Unit 4422E

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

Unclassified

Far West Laboratory for Educational Research and Development
September 30, 1981, 102 pages, EMW-C-0295, Work Unit 4422E

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.

KNOWLEDGE SYNTHESIS AND APPLICATION OF CRISIS-EXPECTANT LODGING/SHELTER GUIDANCE

Unclassified

Far West Laboratory for Educational Research and Development
September 30, 1981, 102 pages, EMW-C-0295, Work Unit 4422E

The report presents literature reviews and syntheses on selected topics related to the training of lodging/shelter managers in a crisis-expectant period. Two principle task areas were addressed and the following products are reported: a content outline for shelter management training with an accompanying proposal for course elements of a complete training package for lodging/shelter managers; and detailed outlines and specifications for two of the elements (training modules) from this package--shelter organization and radiological defense.

Also included in this report are: a review of and a set of recommendations for procedures that would allow for staff expansion and rapid training of lodging/shelter managers in a crisis-expectant period; a review of techniques and recommendations for insuring trainee motivation and commitment during peacetime; and a brief summary of ancillary knowledge consolidation and application tasks related to lodging/shelter guidance.


DATE
ILME